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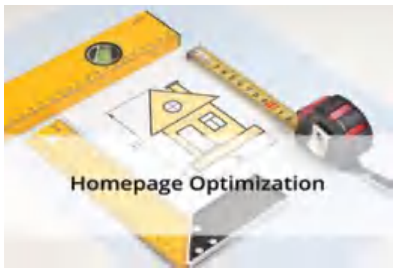
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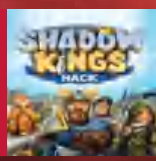
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# MESSAGEBOARD

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### THE BEST FREE ANTIVIRUS SOFTWARE

**I do not use Windows Defender because it missed many viruses that my old antivirus found. Unfortunately my old antivirus' 1-year subscription is over and I don't wanna pay money for an antivirus. Which is the best free option?**

*- Akshay*

Eset and eScan, both have a very good free version and if you go for paid subscription, then there are plenty of features and strong protection against threats.

*- Ashok Pandey, PCQuest Labs*

### THE CAMERA WITH THE BEST ZOOM QUALITY

**Looking for a camera with a really good and clear zoom? I have a Nikon L830 now, which has a 34x optical zoom. I need to be able to take really detailed pictures of polishes. The macros that I take now are pretty decent but if the glitter is too fine then my camera just doesn't cut it. My budget is around Rs 24,000j. So, pls tell the best option.**

*- Raj K*

Your camera is certainly capable of photographing things like jewelry which have "glitter", but you will have to refine your technique. The way jewelry photographers light their products it to place them in a light tent and use two or more 500-watt lamps to supply the lighting. The tent evenly distributes a softened light to prevent glaring reflections and fill the shadow areas of the jewelry. Of course, you will need to mount your camera on a tripod if the exposures are longer than about 1/250th second. If your images are consistently under exposed, you need to adjust the camera's exposure compensation until you get the proper exposure.

*- Ashok Pandey, PCQuest Labs*

### THE BEST ULTRA WIDE LENSES FOR PHOTOGRAPHY

**Which of these Ultra Wide Angle Lenses should I get? Canon 10-18 Sigma or 8-16 Tokina 11-16? I have a Canon t6s (APCs). Which of these is the best? I want the best image quality and don't really care about the price of these lenses.**

*- Aditya*

The sigma will give you the widest angle of view, though, all three lenses will provide high-quality images on a camera with an APS-C sensor. It is not until you are using a full frame, high-resolution camera that any difference in image quality will start to show up at the edges of your images.

*- Ashok Pandey, PCQuest Labs*

### THE BEST SMARTPHONE UNDER 20K

**I want to buy a smartphone under 20k which must have good camera plus long battery life.**

*- Ramesh S*

Now a days when you opt for 20k sub-range category you can have multiple choices. Like the Moto X Play having 21 MP rear camera and 3630mAh battery. You can also go for Lenovo P1 which has been recently launched but has killer features like 13 MP camera, 4900 mAh battery and this phone can be used as power bank for charging your other devices. So I think you can go for either of these devices.

*- Swaraj Sourav, PCQuest Labs*

### THE BEST SMARTPHONE UNDER 6K

**What can I expect in sub 6k category now? I mean what should be the hardware configuration and screen size I can get in this price range?**

---

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Nowadays mobile companies break all the barriers to make an affordable handset with the best possible configuration. Micromax Canvas Xpress 2 is a phone where you get an Octa-core processor, 13 MP camera, 1 GB RAM and 8 GB storage under 6k. We tested this device in our lab and we found it to be a viable device. Phones like YU Yunique, RED MI 2 are also good and have similar features.

*- Swaraj Sourav, PCQuest Labs*

## THE BEST HIGH-END TABLET

**I am looking for a high end tablet that should offer a great multimedia experience. My budget allows me to go around Rs 40K. The screen should be amazing, have a good battery backup and good storage capacity. Please suggest.**

*- Ritika S*

We have tested some amazing devices in this category and we recommend you to opt for Samsung Galaxy Tab 8.4 inches. It has a brilliant screen and amazing battery back up. Moreover as you need more storage, you can expand the memory to 128 GB. This product will best suit your requirements. Another option is iPad Air with Wi-fi.

*- Anuj Sharma, PCQuest Labs*

## THE BEST PRINTER FOR A SMALL OFFICE

**I run a small office and want to keep only one printer to print all my documents. Which one would you suggest?**

*- Ravi M*

HP Deskjet Ink Advantage 2545 All-in-One Wireless Printer is best suited for you. It is an MFP so apart from printing you will have an advantage of scanning, and copying your documents. The print quality is good and the device offers good value for money right now. If you can stretch your budget a little, then consider Canon MG 3570 which also features double sided printing which saves time in the long run. Being inkjet printers these deliver good results even if you wish to print some photographs.

*- Anuj Sharma, PCQuest Labs*

## A GOOD HEADPHONE FOR A TRAVELER

**I spend a lot of time travelling and want to buy a good headphone that's built for mobile users. Please suggest what to look for.**

*- Rashi K*

Since you will be spending a lot of time travelling, apart from good sound quality don't forget to consider the fact that the headphone will get through extensive wear and tear during its lifetime. So you should look for durability and build quality as quality headphones can last months to years without being damaged. In some headphones ear-cups, folding design, etc is fragile so better check for robust hinges else they might fall apart after some amount of usage. Aluminium body design headband is one you should look for as it shall provide both comfort and durability. Two quality headphones for travellers are Bose QuietComfort 15 and Sony MDRZX100.

*- Anuj Sharma, PCQuest Labs*

## THE BEST UHD TV

**I want to purchase a top-notch TV that should provide a completely immersive experience. I've heard a lot about UHD 4K TVs but are they worth spending money on?**

*- Neeraj V*

UHD TVs still have a long way to go before gaining customer confidence as little UHD content is available today. The UHD TVs definitely produce much sharper and detailed images and will surely enhance your viewing experience. The technology is likely to go mainstream, so it would be good to buy one now to future-proof your investment. Some preferable TV models are: Samsung Curved UHD TV, Sony Bravia 4K and LG UHD LED TV and LG Super UHD TV.

*- Anuj Sharma, PCQuest Labs*

## WEAK ROUTER SIGNALS

**My computer is in the living room, almost 40 feet away from the nearest router. I don't want to invest in a new router, and would rather optimise the connection to the old router either through an Ethernet cable or wirelessly.**

*- Vyom S*

The 40 feet distance should be no problem to connect to a router wirelessly, unless there's some major concrete or steel beams in the way. Simply check the position of your router and clear the connection of such obstructions.

*- Ashok Pandey, PCQuest Labs*

## PREVENTING A PC FROM OPENING RANDOM WEBSITES

**I have Google Chrome set as my default browser. Now the problem is that when I don't touch my computer for about 10+ minutes, it will open Chrome and send me to a page with a virus on it. Obviously I don't touch anything on the page so I don't get any viruses, but it's incredibly annoying. I've downloaded a page-blocking app so that I can block the pages it sends me to, but it rarely sends me to the same page twice. I have Norton 360 virus protection and it says there aren't any viruses on my computer. Please suggest.**

*— Ramieri K*

There is a simple solution. Just go to the "Control Panel" and then "Programs". Every browser supports extensions, your browser also has some extensions which are affecting your PC. Delete the ones you are not sure about, then download Malwarebytes and run it. It should pick up most browser hijackers and successfully remove them.

*— Ashok Pandey, PCQuest Labs*



# leadingedge

**The digital shift has happened and is largely leaning towards mobility, so if your organization hasn't already embraced it, then it's time to do so fast!**

**Anil Chopra**, Editor
anilc@cybermedia.co.in,
@anilchop on twitter

## 3 Ways to Ride the Mobility Wave in a Digital World

Whether it's ordering groceries online or finding a restaurant to order dinner, consumers have gotten into the habit of doing everything online, and mostly from their smartphones. The digital shift has happened, and it's largely leaning towards mobility.

So if your company hasn't already gone mobile, then it's time to do so, and fast!

The opportunity is huge because everyone is impacted from it, right from your internal employees to your customers outside. There are three ways you can do this.

One is to empower your employees with readily available apps to enhance their personal productivity. There are plenty of them available, right from taking notes to personal messaging. They're available as free versions with limited functionality and paid ones for more enhanced features.

Two, since the line between personal and business mobility has blurred, the same device is used by employees for both personal and official use. Here's where you need control to block unproductive apps in office at-least and ensure complete security of all mobile devices. For this, you'll need MDM solutions at the back-end to control device access, and security software on each device to provide safety from malware.

The first two methods can easily be addressed with ready-made, off the shelf software that's easily available. It's just a matter of choosing the right one and ensuring consistent use across the organization.

Third and most important is to build your own app eco-system. This is where you need to put your thinking caps on and observe the key business pain points. They'll differ for different industry verticals, and would require keen observation, discussions with various BU heads, to provide a mobile app roadmap with clear cut business benefits outlined.

The trend in banking for instance, is to replace mobile PoS terminals with Android based apps for field agents. It saves them the burden of having to lug around a heavy terminal. Plus, the transactions happen immediately for collections, payments, etc. so they don't have to report back to office to punch in all data by the EoD.

Likewise, one trend on the shop floor of manufacturing companies and logistics business is to enable shop floor managers with a mobile app that provides them regular updates on their mobiles about inventory, production output, product dispatch/receipt status, etc. It saves them the burden of having to run from pillar to post every time they need to check even small things.

Our cover story this time, provides a hands-on view of how mobility can truly help an organization. We've hand-picked apps across different categories that could be used to enhance employee productivity, improve security, and provide better control of mobile devices in the organization. It's like a digital tool-kit every organization should have. Plus, of course, there's expert advice on how to truly leverage mobility.

We hope you find it useful. Here's wishing all our readers a great festive season!

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# UTM – A Pragmatic Security Solution for SMEs

SMEs in India are not able to adopt IT as the solutions are often provisioned to large enterprises' requirements. UTMs provide a workaround by providing comprehensive security at affordable prices

– Sunil Sharma, VP Sales & Operations, India & SAARC, Cyberoam

Last year ICP (International Comparison Program - World Bank is one of its participants) released a ranking of nations based on the purchasing power parity (PPP). In this report, India was ranked third behind the US and China. It was also stated that Indian and Chinese economies have more than doubled relative to that of the US since it last reported such figures in 2005.

India is growing faster than China and, in fact, faster than any other major economy in the world. With initiatives like Make in India and Digital India, there is a lot of interest in India as an investment destination. Though, it's the services sector which drives India's growth story, Foxconn's entry is a big story for those who see India as the next electronic manufacturing hub after Taiwan and China.

However, there is another significant aspect of this growth – India's booming SMB sector. With 51 million SMBs (next only to China), India is one of the fastest growing SMB nations, globally. A recent study by Zinnov on 'Digital SMBs' says that while only 40% of SMBs in India are tech-savvy, the number is expected to increase to 90% of all SMBs by 2020. Incidentally, SMBs in India are not able to adopt IT as the solutions are often provisioned to large enterprises' requirements. These IT solutions are very generic and lack vertical centricity and also have a high learning curve. Unfortunately, this is true for IT security as well.

Nonetheless, security is one area where organizations cannot afford any compromise. Presently, India experiences a huge number of data breaches (one of the highest number of average data breaches) and is a popular target for cyber criminals. Increasing adoption of technologies like wireless LAN, Wi-Fi hotspots, 3G wireless etc. have created a demand for products that provide holistic network security. The Government of India is also renewing its focus on improving the security and privacy regulations for the country as a whole and also at the industry level. According to a KPMG report, the market for information security in India will grow by 50% in the next three years. This is expected to trigger demand for advanced security systems like UTMs (Unified Threat Management Solutions).



**Sunil Sharma**
VP Sales & Operations,
India & SAARC, Cyberoam

*"According to a KPMG report, the market for information security in India will grow by 50% in the next three years. This is expected to trigger demand for advanced security systems like UTMs."*

## What next gen UTMs provide

Next generation UTMs are designed specifically keeping in mind the changing requirements of SMBs. UTMs act as a comprehensive security solution that bring several advanced capabilities like WAF (Web Application Firewall), Logging and Reporting and IPS (Intrusion Prevention System) in addition to the Firewall, on a single appliance, removing the need for SMBs to invest heavily in any other standalone security solution for such purposes. These appliances are generally easy to deploy and manage with built-in security policy templates which substantially decreases the need for a highly-specialized technical staff for maintaining the organization's networks.

Moreover, UTMs which globally have a well-entrenched presence in small organization networks, are now seeing an increasing adoption in enterprise networks as well. Enterprises see a great deal of sense in switching to these appliances as UTMs are keeping step with complex network security challenges and offer higher throughputs as well. After all, it's hard to resist the unique value proposition UTMs offer by consolidating the functionalities VPN boxes, legacy firewalls (traditional perimeter security), and IPS used to offer on standalone basis in the past.

UTMs today form the core of security for modern businesses and can help young SMBs in India to adopt the latest in technology while ensuring that they maintain the requisite balance in their security, connectivity and productivity needs. □

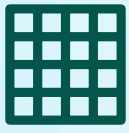
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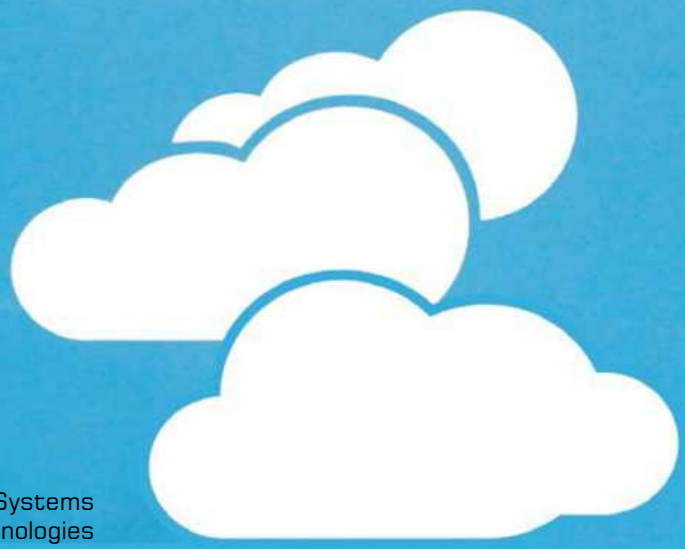
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# The Business Case for Using HPC in the Cloud

Using cloud based HPC applications is a cost-effective way to gain affordable access to otherwise expensive HPC resources for SMBs



– Sandeep Lodha, Co-Founder, Tyrone Systems & Netweb Technologies

From enabling us to model and manipulate any product, process or service at will, High-Performance Computing (HPC) solutions are today considered an essential component for business success. From protecting the common man from marauding natural disasters or satisfying his taste buds with a perfectly contoured potato wafer, HPC is playing a pivotal role everywhere. By moving to the cloud and being available on demand, HPC has moved from being an expensive endeavor to a cost-effective technology within reach of virtually business enterprise and budget.

## Who needs HPC?

It's true; High-Performance Computing solutions do deliver the tremendous competitive edge in the marketplace. The ability to quickly model, manipulate a product/process and to see the impact of various design decisions even before a physical prototype is built is of immense value to any organization. Take for instance in the development of a new car; designers can use HPC to explore various new designs, optimize the product with numerous design/prototyping iterations, and then validate changes through on-demand simulation to achieve quick results. Use of HPC in this case not only cuts down budgets required for prototyping it also enhances the organization's ability to bring better quality innovations to market fast and cost efficiently.

## Typical HPC Applications

It was a common misconception that HPC is deployed only for technical computing applications. The following table clearly demonstrates that HPC can and also be for business computing applications:

| High-Performance Technical Computing (HPTC) | High-Performance Business Computing (HPBC) |
|---|---|
| Chemical engineering: Process and molecular design | Computer aided engineering (CAE): Automotive design and testing, transportation, structural, mechanical design |
| Geosciences and geo-engineering: Oil and gas exploration and reservoir modeling | Digital content creation (DCC) and distribution: Computer aided graphics in film and media |
| Defense and energy: Nuclear stewardship, basic and applied research | Electronic design and automation (EDA): Electronic component design and verification |
| University/academic: Basic and applied research | Mechanical design and drafting: 2D and 3D design and verification, mechanical modelling |
| Government labs: Basic and applied research | Economics/financial: Wall Street risk analysis, portfolio management, automated trading |
| Weather forecasting: Near term and climate/earth modeling | Bio-sciences and the human genome: Drug discovery, disease detection/prevention |

## HPC in the Cloud

The advent of cloud has made many things previously considered impractical suddenly practical. Not only does the cloud guarantee rapid access impervious to geographical boundaries it also

promises to be make everything it hosts cheaper, flexible and pervasive.

Cloud based HPC, the latest method of throwing large computer cycles at a complex problem, employs the Internet as a basis for a cycles-as-a-service model of computing. The compute cycles in question live in the cloud somewhere allowing a user to request remote access to cycles on-demand. A cloud based HPC solution provides dynamic and scalable HPC resources to the end-user as a service. Although clouds can be cost effective and allow HPC to be purchased as an expense and not a capital asset, it does place some layers between the user and hardware resulting in some pressures related to bandwidth and data security while accessing or moving data from a public cloud or even a remote HPC center.

Within the cloud, however, not everything is equal. There is a marked difference between performance offered by traditional clouds and HPC specialized clouds. With a traditional cloud, for instance, users are guaranteed a minimal level of performance while promising them instant availability of resources, scalability and software choice. Thread applications, single programs that run multiple inputs points simultaneously, can run well and cost effectively on such clouds.

HPC applications, however, need something more. They require specifically designed storage, tuned hardware that is closely coupled with processor speed, interconnect and memory, ability to communicate with remote user processes, optimized HPC libraries, hardware support, and batch scheduling. Specifically, applications that are interconnected and I/O sensitive, require performance accelerators, parallel & superfast computation, interconnect and storage, and need to move large datasets in and out of the cloud without impacting computation time, must choose specialized HPC clouds for superior performance.

## HPC in Cloud – Exciting Benefits

- **Easily Scalable & Flexible –** Cloud based HPC solutions are truly scalable providing customers with the freedom to choose all the components of the virtual cluster including CPU cores, memory nodes, storage, operating system and software needed for each application. Additionally, users are also able to share control over their own virtual cluster with other users and share processing time, data and results
- **Easy to start –** Businesses that use cloud based HPC applications do so because they are easy to launch. Especially when coupled with cloud automation, cloud based HPC applications are simple for even end users that have lesser experiences in setting up hardware and configuration. Automation allows these end users to launch virtual HPC clusters with the click of a button and the system dynamically handles resource provisioning on-demand and as per usage
- **OPEX instead of CAPEX –** Using cloud based HPC applications, especially if you are a small business, is a cost-effective way to gain affordable access to otherwise expensive HPC resources
- **Outsourced Management –** While users may stay focussed on their respective projects, the cloud based HPC environment is continuously monitored by qualified professionals. This approach also allows users to deploy HPC resources on call and only when needed, saving tons of money
- **Latest hardware, software, interconnect, virtualization, workload management techniques** – Managed service providers are able to push upgrades with ease and simultaneously. This reduces the discrepancy between the different versions of each application and compatibility issues that could be troublesome among team members working together on a project. It also provides access to current software and because end users are charged only for bandwidth and storage, it comes at no additional cost
- **Managed by experts you don't own –** Experts believe that only 7% of the total cost of acquiring and operating an HPC system, over three years, comes from hardware cost. The much bigger portion of the pie comes from the high cost of expertise (staffing), equipment, maintenance, middleware, and training. By opting for cloud based HPC environments end users benefit from availability of highly qualified HPC manpower and on an on-demand basis

Cloud based HPC solutions represent a new competitive advantage for many companies and industry sectors. Many organizations, maybe even your competitors, are using HPC in Cloud as a way to help reduce cost, design new products and processes, solve problems, and increase profitability. □



**Sandeep Lodha**
Co-Founder, Tyrone Systems & Netweb Technologies

*"Cloud based HPC solutions are truly scalable providing customers with the freedom to choose all the components of the virtual cluster including CPU cores, memory nodes, storage, operating system and software needed for each application."*

# Emerging Trends in Enterprise Storage Tech

In this era of data boom, businesses need to revamp their storage infrastructure to incorporate new technologies to improve efficiencies and support new business needs. Sanghamitra from CIOL bureau interacted with Mark Re - SVP, CTO, Seagate Technology to find out the latest innovations in storage tech

– Mark Re - SVP, CTO, Seagate Technology

We live in the era of data explosion and the time has come for organizations to plan for a robust data storage infrastructure to attain efficiencies. In these times, some of the big trends are Big data, IoT (Internet of Things), mobility and cloud. As a matter of fact, these trends are driving the need for more advanced and sophisticated storage solutions as well.

## Innovations in storage tech

We know that technology trends like IoT, mobility, social media are bringing changes in data consumption patterns and creating new demands. What we are seeing today is that these trends are not limited to enterprises. Even consumers are adopting these trends rapidly as well. With these trends, the amount of content that is being created, stored and accessed on the go, is increasing. Hence there is a need for a storage solution with a high capacity, delivering efficient performance.

Shingled Magnetic Recording (SMR) and Heat-Assisted Magnetic Recording (HAMR) technologies have improved the areal density (the amount of data that can be stored on a single disk) while maintaining a low cost per gigabyte, in order to support global growth in cloud and mobile usage.

In addition, the adoption of Hybrid technology as the future of next- gen storage is a key trend. What makes the hybrid drive special is that it combines the high-capacity of a HDD with SSD-like speed at a fraction of the price. So users can get the speed they want and the capacity they need in one drive, bridging the gap between a HDD and SSD with the best value/ performance option for consumers.

Apart from this, in today's era of BYOD where it has become imperative for people to carry, retrieve and share data on-the-go, consumers are facing storage constraint issues on their mobile devices. Therefore, portable and wireless storage drives appeal to anyone who uses a smartphone, tablet or other mobile device and stores digital content in it. Consumers have embraced the idea of carrying and sharing their content on the go, and require greater storage capacities to do so.



**Mark Re**
SVP, CTO, Seagate Technology

*"Shingled Magnetic Recording (SMR) and Heat-Assisted Magnetic Recording (HAMR) technologies have improved the areal density (the amount of data that can be stored on a single disk) while maintaining a low cost per gigabyte"*

## Meeting SMB storage needs

Data is the lifeblood of any businesses. How well a company manages and protects the data can go a long way towards determining its success or failure. However, given SMEs' limited budgets and manpower, setting up a strong enough IT infrastructure that supports and protects company's entire data is often a big challenge.

Today, cloud computing has brought a revolution to SMEs. Cloud storage provides notably easy access to data from any place where there is an Internet connection. However, a lot of businesses are also aware of potential security and operational cost issues.

In view of this, smarter SMEs are adopting a mixed approach to their storage needs. While leveraging on the benefits of what the cloud services can offer, they also integrate what we call a NAS (network-attached storage) solution. The key advantage of this approach is that it allows SMEs to establish their own cloud storage while keeping control of their data.

For example, there are many organisations with networks of up to 50 computers, and with little-to-none IT support available in-house. Networked Attached Storage (NAS) solutions are designed to be easily up and running without dedicated IT support. This helps small businesses stay organised and focused. The NAS device management is effortless from a desktop, laptop, tablet, or even a smartphone.

The NAS HDDs highest-capacity storage for 1- to 8-bay NAS systems. NAS HDD has been specifically designed to minimise rotational vibration (RV) effects typically found in multi-drive solutions, improving system performance and reliability. Extended error recovery controls helps to ensure drives comply with NAS system requirements for better data integrity that quickly and reliably support home and business applications.

## How Digital India helps enhance storage tech

Consumers in India are rapidly embracing and adopting new technologies like cloud and portable storage, and several visionary government campaigns have opened up many new avenues.

Under the Digital India campaign, we expect to see deeper mobile device penetration and increasing use of video, big data analytics and the cloud. All of this will continue to drive data growth and require larger and more effective storage solutions. Also, the Indian government's Smart City vision will generate a greater dependency on technology and hence an amplified need for critical data storage, analysis and retrieval.

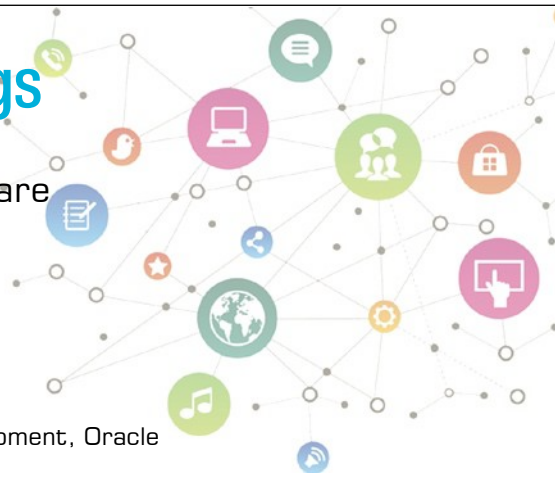
## Upcoming storage tech

Seagate is working with CERN openlab to collaborate on the development of the Seagate Kinetic Open Storage platform. CERN Openlab's mission is to accelerate the development of innovative new solutions to be used by the worldwide LHC community. CERN Openlab provides companies with a framework to test and validate cutting-edge information technologies and services in partnership with CERN. The partnership aims to help CERN, the European Organization for Nuclear Research, to better manage and store the 100 petabytes of data the Large Hadron Collider has generated to date, as well as the additional 2-3 petabytes of information it produces on a monthly basis in its quest to further humanity's understanding of the universe.

Seagate is also working on Heat-Assisted Magnetic Recording (HAMR) and Shingled Magnetic Recording (SMR) to increase the capacity of the drives. Apart from this, they are working on Two Dimensional Magnetic Recording (TDMR), which places one more data reader onto a drive's read/write head. □



# Role of Java in Internet of Things



The ubiquity and pervasiveness of IoT devices, along with the growing fragmentation of hardware architecture, software, and infrastructure, calls out for standards that can be adhered to by programming languages to improve ease of deployment and scalability. Java, with interoperability at its heart, is a natural fit

– Sanket Atal, Group Vice President, Product Development, Oracle

Imagine a world of technology that thinks on its own; where machines let owners know when it's time for maintenance or a quick fix. Imagine a world where everyone and everything from people to inanimate devices have a unique identity and are connected to each other. This new reality in technology, called the Internet of Things (IoT), is here.

What is IoT really? IoT is about collecting and managing massive amounts of data from a rapidly growing network of devices and sensors, processing that data, and then sharing it with other connected units to make real time decisions. You are already beginning to see it around you - in the smart meter from your utility company, in the environmental controls and security systems in your home, and in your car's self-monitoring capabilities. In this connected world, the proliferation of intelligent devices has created a market for entirely new solutions based on IoT technology. With the ever-increasing amount of data that is inherent in an IoT world, the key to gaining real business value is effective communication among all elements of the ecosystem.

IoT is being referred to as the next big IT revolution after the mainframe era, the proliferation of personal computing and the arrival of cloud computing models. This phenomenon of interconnectivity and technology embedment is making a drastic shift on the influence of IT in our daily lives. At the same time, it offers significant business opportunity for firms to grow, developers to innovate and newer applications to be built. Gartner estimates the total economic value-add from the Internet of Things across industries will reach US$1.9 trillion worldwide in 2020.

As thousands of devices and sensors get connected, waves of new data are pouring in from a vast array of sources that range from resource-constrained devices to desktop-class systems to embedded silicon chips. The ubiquity and pervasiveness of these devices, along with the growing fragmentation of hardware architecture, software, and infrastructure, calls out for standards that can be adhered to by programming languages, software platforms, tools and testing frameworks that will aid the developer community and improve ease of deployment and scalability. Java, with interoperability at its heart, is a natural fit for developing of emerging IOT technologies.



**Sanket Atal**
Group Vice President,
Product Development, Oracle

*"We are already beginning to see early adoption in sectors like healthcare, with Java Embedded showing up in lifestyle health devices, patient monitoring technologies and home healthcare or telehealth tools."*

## Why Java for IoT?

One of the initial uses of Java was to help connect home-entertainment devices, and this basic tenet of interoperability is what makes the platform a good fit for connected devices in IoT ecosystem. It offers comprehensive functionality for resource constrained devices, with the highest level of functionality, security, connectivity and scalability in the industry. As an open standards-based platform, Java provides code portability in IoT environments, accelerating time to market as new generations of sensor technology emerge. The secure, in-market device software updates further extend product lifecycles and allow new services to be provisioned remotely. In addition, Java has a massive ecosystem of more than nine million Java developers worldwide who are developing innovative applications for the connected world. Using java in devices makes it easier

for product engineering as one can leverage teams with java experience to work on programs that run on devices and backend servers instead of managing teams with specialized expertise in variety of development languages and environments for various devices.

When one develops an embedded application one has to think about the processor, the real-time operating system, and the different protocols that will be connected. Java ME abstracts all of that, so that when creating an application, it can run across the many different devices without having to change how those applications are written. The application is written once and can be prototyped on different types of hardware platform, so when one is ready to move into a production-type environment or system, the developer can use the same software on a different chip set or operating system. For e.g. when you write your application and do your prototyping on Raspberry Pi or Edison board, then you can do the same on a small microcontroller device. The same application that runs on the higher-end systems runs on the low-cost devices. Security is a major concern in the wirelessly connected world. The Generic Connection Framework 8 (GCF 8) Access Point API in Java provides the latest security standards and the highest levels of networked encryption and authentication to ensure data privacy.

We are already beginning to see early adoption in sectors like healthcare, with Java Embedded showing up in lifestyle health devices, patient monitoring technologies and home healthcare or telehealth tools. In the auto industry, the Java Embedded-enabled IoT sensors and devices are increasingly being deployed for multiple use cases from fleet management and logistics to pushing offers to rental car drivers.

## Conclusion

The vision of IoT is to create an automated system of computers, devices, and sensors that process their own data instead of depending solely on people for input. As a result, the system as a whole can have a view of what's taking place at any location, at any point in time. This would lead to a world of connected systems that could greatly reduce waste, lower costs, and eliminate loss for just about any human-machine activity. Java has an important role to play in this ecosystem. Given its ability to run on a wide range of devices— from mobile and embedded systems with limited CPU and memory, to servers with immense power and capacity — Java can power the world of compute resources with ubiquitous connectivity in the coming decades. □




# Advances in Data Deduplication Tech

With growing data volumes, organizations are struggling to manage their storage and resorting to adding cheaper storage. A more efficient method is data de-duplication. Here are a few techniques to do that.

– Ganesh Kuppuswamy, Director, Arcserve India & SAARC

Too much data, not enough time, not enough storage space, and not enough budget. Sound familiar?

Since the first mainframes, efforts have been made to optimize storage capacity requirements and data protection processes. In the open systems world, the issues mentioned above are the same as years ago when the first data deduplication technology became mainstream. Backups are failing, taking too much space, and costing way too much.

Globally, data volumes are growing exponentially and organizations of every size are struggling to manage what has become a very expensive problem. Cheaper storage helps, but is not an operationally efficient solution for many workloads. Data needs to be shrunk to more manageable levels. Too much data causes real problems for companies overprovision their backup infrastructure to anticipate rapid future growth.

Today, new technology advances are needed to combat the unstoppable and exponential growth of virtual machines and data. Here are few deduplication technologies prevails in the industry.

*"With a unified data protection strategy, backup administrators can optimize storage requirements and bandwidth as well as accelerate protection and recovery across multiple sites."*

## Target Deduplication

In recent years, organizations realized that they could not make their backup windows with traditional backup architectures. Besides backup performance, they struggled with the essential cost of storing large amounts of backup data. Storage costs exploded as backup schemas imploded. Deduplication appliances became the preferred solution to address the issue. The process involved taking backup data, optimizing it through deduplication processes and storing it on disk.

Target deduplication has worked very well and is still in use today in many environments. Target deduplication is attractive because it does not require the user to drastically change their backup software configurations or policies, rather only to change the destination of the backup streams.

## Distributed deduplication

Certain vendors introduce additional costs by essentially charging for each distributed deduplication agent on each system that needs protecting. While there might be some benefits or "boost" from a disaster recovery standpoint, the multiplication of expensive systems, software licenses and associated bandwidth requirements only add to the tab. In addition, while tools may exist, this type of architecture can be onerous from a management perspective.

## Source-side deduplication

Why deduplicate data after the fact if we can only backup the new and unique data needed at the source? Why not share all of the deduplicated intelligence across required across platforms? That is global source-side duplication, and it is where the industry needs to move forward. Global source-side duplication is what many end-users have recognized as the critical backup technology moving forward. The challenge of global source-side duplication is to ensure that the source (client) system is not bogged down by the deduplication software.

## Adopt Unified Data Protection Strategy

With a unified data protection strategy, backup administrators can optimize storage requirements and bandwidth as well as accelerate protection and recovery across multiple sites. In addition, the solution allows for in-place re-hydration of data, for fast granular restore, including from tape.

It is the true "Global" deduplication across all the clients in the infrastructure is central to limiting the unnecessary storage and transfer of duplicate backup data. Data is deduplicated across nodes, jobs and across sites.

The global deduplication in a unified data protection strategy goes beyond the common limitations of deduplication where it only applies to the WAN replication cache, and not what is actually stored on disk, thus reducing the overall potential benefits, in terms of bandwidth and storage savings.

A right unified data protection strategy improve resilience and availability. Because the deduplication data is stored centrally in the Recovery Point Server, it is easy to protect the backup infrastructure. For example, all the information in the data store can be replicated to the cloud, another server in the same data center or offsite.

Organizations must easily and efficiently keep up with rapid data growth and manage a combined physical and virtual infrastructure, but specialized data protection 'point' solutions are often too limited in scope, and large-enterprise solutions can be too unwieldy for many smaller businesses.

The concept of unified data protection brings significant value to enterprises that are struggling to meet increasingly stringent RPOs and RTOs across physical, virtual and cloud environments. Economics will drive data protection consolidation as administrators look to simplify how they handle backup, recovery, and business continuity requirements in today's heterogeneous world. □


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# Social Media Platforms: The New Go-To Place for Recruiters

Employers are increasingly using the power of social media platforms to verify candidates' background and in turn rope in the best talent for their organisations

– Cheran Chandrasekaran, CEO, Infoview

Regardless of the growth stage that an enterprise is in, the fact that employees are the cornerstones on which the past, present and future of any company rests upon is a long-established truth. But if you're an employer on the look-out for potential talent to bolster your ranks, you're not alone. Every business, from start-ups to established business ventures, seek the best and the brightest within their ranks to fuel their success story. As if competing against rival businesses was not a task in itself, you now need to battle with hundreds and thousands of competitors over every human resource that you want for your organisation. The pressure is enough to make you tap every resource you know and invest heavily in head-hunting to find the best out of the existing talent pool. The endeavour may look like discovering the inconspicuous nail in a hay stack. What employers have not yet realised is that an entire network of job seekers is at their ready disposal if only they are to look in to the right place i.e Social Media platforms.

Surprised much? Don't be. Social Media platforms such as Reddit, Facebook, LinkedIn, Twitter, MySpace and StumbleUpon have emerged as the major talent database for employers looking for professionals to hire. With 75 Million users on LinkedIn and 500 Million users on Facebook, social media platforms offer employers an ocean full of unearthed pearls to choose from. So popular has the trend been with the recruiters that it has led to the development of several web-based applications called Social Recruitment Tools which can optimise applicant engagement and hiring through Social Media channels.

## How social media aids recruitment

But why has the trend changed, and that too so dramatically? Like everything else, blame it all on the internet. With the recent explosive penetration of digital devices and high consumer internet adoption rates, it would be tough not to. You can inform potential job employees about upcoming job openings through your social media channels, who also allow professionals to follow a particular job in your business. There are even industry and location specific groups which see many prospective applicants browsing through various openings in their area of interests. With young Indian professionals who are always seamlessly connected to one another and everyone else, Social Media has emerged as a veritable magic wand in the hands of recruiters, matching their recruitment needs adequately in terms of outreach and impact.

*"A recruiter can no longer be content with just posting a job to think his or her task is completed. Attracting talented individuals in this day and age of information overload requires a seamless blend of interaction and engagement to hold user attention"*

However, Social Media tools require careful handling to optimise their functionality. A recruiter can no longer be content with just posting a job to think his or her task is completed. Attracting talented individuals in this day and age of information overload requires a seamless blend of interaction and engagement to hold user attention. What's more, create an attractive enough campaign and you may find your job vacancy shared by individuals amongst their own social circles without any prompts. This increases the campaign's reach to a larger audience base at a fraction of the cost of traditional mediums. And since sharing and supporting ideas has become the new order among Internet users, why not use it to power your own recruitment drive?

Recruitment is no longer just about what the applicant can offer the company, it is also increasingly about what the company in turn offers the employee; personalised interaction through Social Media is the opening gambit in the game to attract potential employees. Managers and recruiters no longer open Facebook or Twitter to change their statuses; they do so to scan the talent pool for the best fit for their organisation. So forget the age-old practices of posting a job vacancy in newspapers and scouring job fairs for potential employees, Social Media recruitment has very much arrived and is here to stay for a long, long time. □

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# Era of Connected Devices in the FMCG Industry

Most companies are experimenting with IoT technologies to manage supply chain, inventory and warehouse, and to improve marketing effectiveness and in-store experience for consumers. Here we discuss how it's going to gain in prominence in future

– Arjun Sinha Roy, VP – IoT, netCORE

Over the years, Internet of Things (IoT) has evolved to become a crucial element in people's lives, across the globe. Gartner substantiated these claims in its recentreport that anticipated the adoption of IoT in India to mature through 2020. The adoption of IoT in the country is currently limited to sectors such as energy and utilities, oil and gas, transportation, healthcare, government and fast-moving consumer goods (FMCG).

As with every technical offering, the role of IoT always starts with the most crucial element - identifying islands of physical assets in the operational value chain. CXOs are always striving to achieve maximum efficiency in the way in which all assets function in order to drive value for the organization. Keeping this in mind, several organizations have built models for defining the value to be derived from various assets in order to maximize returns from their IoT strategy.

The FMCG sector in particular has been stricken by complexities over the years. The complexities relate to multiplicity of compliance requirements, complexity in taxation, inadequate storage and transportation infrastructure and now it is on the brink of a major revolution. Over the past decade or so, the space has been witnessing advancement with the help of technological advancements in the supply chain and the logistics space. IoT is further set to transform the FMCG sector by optimizing the production and transformation.



**Arjun Sinha Roy**
VP – IoT, netCORE

*"In the FMCG sector, procurement and the ecosystem of storage and transportation has become a crucial factor in ensuring that the production operations keep running. Many companies are making it mandatory for their contracted transporters to have GPS trackers to ensure the tracking of raw materials to the factory."*

## How CXOs should pursue IoT deployments

Recent reports have highlighted the complexity of Indian quality standards across the food and dairy sector. IoT enables real time data and analytics which is the key to mitigating risks and boosting productivity across the organizational value chain. IoT implementations in the FMCG space should ideally follow a 4 step process:

1. CXOs should look at the entire organization and identify key parameters across the entire value chain which affect risk and boost productivity.
2. Once the parameters are defined, the next step is to identify the parameters in terms of data benchmarking.
3. The parameters being tracked essentially need to be measured against benchmarks which are defined as ideal in conjunction with different business and operation teams.
4. Organizations need to build basic data models in order certify compliance or identify and generate actionable points.

In the FMCG sector, procurement and the ecosystem of storage and transportation has become a crucial factor in ensuring that the production operations keep running. Many companies are making it mandatory for their contracted transporters to have GPS trackers to ensure the tracking of raw materials to the factory. In the food and dairy based companies, the quality of the raw material throughout the procurement supply cycle is crucial from the perspective of quality compliance. Increasingly we are seeing companies invest in sensor based solutions. These solutions measure parameters such as temperature, humidity, carbon dioxide or any other relevant parameter critical to the quality compliance of the raw materials. The sensors are increasingly paired with controllers which have SIMs to transfer the data to an IoT platform. Also, these companies are heavily investing in building management systems and advanced HVAC (heating, ventilating, and air conditioning) systems for factory storage. The objective would be once again to make sure that the optimal environment parameters are in place to ensure quality compliance.

## Use of existing automation systems to augment IoT

Most factories have already implemented basic plant

automation using PLC , a digital computer used for automation of typically industrial electromechanical processes and SCADA , a system operating with coded signals over communication channels so as to provide control of remote equipment. Organizations can integrate environment data and energy consumption with the plant automation platform. IoT enables organizations to combine analytics with the input data to improve the efficiency in plant automation.

The distribution and retail formats will also see a lot of innovation from the IoT perspective. We are already seeing organizations in the food and dairy sector actively promoting the adoption of temperature and other sensor-based IoT solutions and are trying to co-relate all the data in order to ensure that the storage facilities are seamless across Carrying and Forwarding and the distributors.

Increasingly we are also witnessing marketing and sales coming under the ambit of IoT. Sales staff are increasingly moving with hand-held terminals which can enable the organization to track the movement of feet on street, get real time data on secondary sales and drive efficiency in sales forecasting. Mobile network or GPS is increasingly being used to track the efficiency of feet on street. We are also seeing the adoption of IoT in marketing with BTL activities being tracked using mobile and GPS. Adoption of IoT in the sales and distribution process will lead to greater adoption of value added products for the FMCG industry with higher margins. Data related to storage environments will help organizations reduce loss due to wastage impacting the organizations' bottom-line. It will drive the next round of innovation and disruption in the FMCG sector similar to the way the sector witnessed with the adoption of Internet.

The adoption of these technologies will have a huge impact in terms of product innovation. One is expected to see the movement of fresh produce increasing as the supply chain becomes modern and will come under real-time supervision and control.

IoT as mentioned is not a single technology which can be implemented in a business function. It is a framework which enables an organizational change with respect to real-time data from across the organization and from different stakeholders. IoT follows the rule of 1% in efficiency. The effort involved in implementing IoT, if done right pays off really fast. A mere 1% improvement impacts the organization's bottom-line straight away.

In the coming years, the impact of the IoT on FMCG in the country will be significant because there are huge amounts of data that need to be tracked and managed and will affect how organizations design their business processes. □



# Increase Rack Density to Save on Data Center Costs

Vertically scaling up the data center will allow rapid expansion of power density by extending power distribution all the way to the individual rack and cabinets, without undertaking any major structural changes in the data center. This helps save precious real estate while not burning a hole in a data center admins pocket

– Sanjay Motwani, Regional Director, India, SEA, Taiwan & Hong Kong, Raritan International

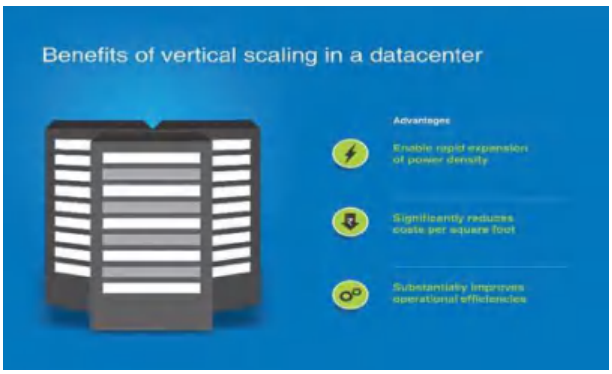
Imagine a data center in New York or Shanghai or Bangalore for that matter, looking at expansion. With leases and rentals hitting the roof, what is the most economical way for them to expand? A horizontal growth will only incur additional expenses of cabling, cooling and not to mention gigantic real estate. Adding to the operating cost can only put pressure on bottom-line. Data centers have a continuous need to look at ways to be cost effective in order to get a competitive edge in the crowded market space. With the realty rates reaching the sky, data centers are challenged to maximize benefits from existing space without impacting their expansion plans. If this sounds like a complex problem, the solution is simple – find ways that provide more computing power for less cost per square foot. Now, the question is how do we put this simple solution to work? The answer lies in vertical expansion powered by the right choice of power distribution units.

## Vertical expansion – a new mantra for data center efficiency

Vertically scaling up the data center will allow rapid expansion of power density by extending power distribution all the way to the individual rack and cabinets, without undertaking any major structural changes in the data center. Data center designers and managers are beginning to understand the importance of efficiency in building up and replacing the sprawl with higher density racks.

Most data centers with the legacy infrastructure cater to 4-5 KW per rack while the requirement has shot multiple times – beyond 20 KW per rack in many cases. With the high volume big data streams becoming a norm, data centers need to be prepared to handle more density per rack and therefore must look at maximizing their capabilities. Keeping this in mind, data centers are already moving toward high-density computing environments with new and dense servers being deployed. The primary reasons cited for moving to higher densities include saving facility space and reducing energy costs.

*"Most data centers with the legacy infrastructure cater to 4-5 KW per rack while the requirement has shot multiple times – beyond 20 KW per rack in many cases. With the high volume big data streams becoming a norm, data centers need to be prepared to handle more density per rack and therefore must look at maximizing their capabilities."*




## Right PDUs in addition to high density racks go hand in hand

With changing market demands, data centers need to plan ahead and be ready for future challenges. Though high density racks are playing a pivotal role in increasing ROI of various organisations, power distribution units are equally important. It helps to be prepared and invest in PDUs that are designed with the future requirements in mind. The data centers of the future must have a longer lifecycle and as such need a lot of careful strategizing. One important part of the expansion plan is the choice of PDUs. Balance tilts in favour of PDUs that are capable of extending power distribution all the way to the individual rack and cabinets, without undertaking any major structural changes. Increasing power density by packing more resources per rack is an obvious choice, but then, care is to be taken to ensure this does not escalate operating cost by putting pressure on cooling efficiency or increase cabling cost manifold.

## 3 phase rack PDUs – the ideal approach towards vertical spacing

Three phase systems enable the consolidation of power circuits with 3-phase Power Distribution Units that have a much greater distribution capacity. Intelligent solutions like three phase PDUs which run a single three phase power cable to rack, reducing bulk cabling at bottom. This approach not only frees the space but also increases airflow, bringing down the cost of cooling. Higher voltages at lower currents means smaller cables, which use less copper, weigh less, take up less space and cost less. By eliminating voltage transformations, 400V power reduces energy cost up to approx. 2% - 3% relative to 208V and approx. 4% - 5% relative to 120V.

Smart is in and data centers must have smart ways to monitor, report and operate. PDUs must also provide visibility to improve operational efficiency. Proper monitoring of power usage, voltage levels, humidity and other environmental factors is essential. It is also crucial to maintain pressure and airflow at inlet and outlet level for the health of the data centres. Having a separate monitoring system for each device is cumbersome and impractical, not to mention cost intensive. PDUs that combine power distribution capabilities with smart monitoring and visualization are the best bet.

Customizability is an important aspect for any infrastructure that data centers invest in. PDUs that come with a strict integration framework become an impediment to easy adoptability. Most data centers look for PDUs that are not only compact but are customizable to their requirements including number of outlets, phase balancing, staggered outlets, cord lengths, multiple inputs, remote outlet switching, individual outlet metering, high-power for blade servers and high-density applications, or even 400V power distribution. Three phase PDUs with a capacity to serve 65KW per rack have also made an appearance in the market, providing data centers an unmatched opportunity to scale for huge data flow.

## Conclusion

To sum up, undoubtedly data centers must reinvent themselves in view of the rising challenges. The demands are increasing and so is competition. Staying ahead of the herd requires a whole new perspective that looks at every inch of the available space with a critical eye and build processes that not only sustain the operations today but are capable of scaling in the future. Utilizing each rack optimally and vertically expanding seems to be the path towards viable and sustained growth. Data centres that can increase rack density will definitely have higher cost efficiencies in this highly competitive market. □




# 4 Reasons Why Flexibility in Choice is More Important than a Public Cloud Deployment

Businesses are demanding more than ever from IT. They want choice in devices, rapid creation and deployment of new services, and flexibility as to where applications live, how they are managed and by whom

– Anantharaman Balakrishnan, Country Head, EMC Global Services India



In many ways, public cloud penetration started with Line of Business managers. Often it was this group of first-adopters that originally noticed how agile, inexpensive cloud solutions could be taken as-a-service and would deliver against their needs much more quickly than their IT department could, at that time.

The finance director who needed a simple, user-friendly way of pulling together reports at year-end; or the marketing manager in urgent need of some extra hosting capacity for a campaign… Whatever the circumstance or your need, the public cloud often provided a cheaper, faster and better service than IT departments could muster.

This – the birth of a public cloud era – was an important stage in the overall cloud story, but one from which we have moved on. A recent survey by EMC found that organizations are increasingly moving to the cloud, with 76% now agreeing that combining public and private cloud can improve security and agility. Businesses are demanding more than ever from IT. They want choice in devices, rapid creation and deployment of new services, and flexibility as to where applications live, how they are managed and by whom. Against this backdrop, they want to do more with less, lower their costs and have the ability to scale instantaneously. To meet these expectations IT organizations must deliver IT as a Service (ITaaS) via a well-run Hybrid Cloud that brings together the performance, security, and control of private cloud with the flexibility and cost advantages of public cloud.

Both technology and the role of the IT department have now evolved. Public cloud services still have a huge amount to offer, but they are by no means automatically the best option for business in every case. Yet some LoB managers continue to think it is. The fact is that when it comes to the cloud, LoB managers no longer need to face an either/or choice between public or private cloud alternatives. Today, managers can use both: the hybrid cloud delivers true agility that means that the business can access the right kind of service that delivers on specific requirements each and every time.

## Cloud Offers Varied Choice

The beauty of cloud computing today is that we live in an 'and' world. The days of or', where you had to choose one type of cloud over another, are shrinking into the past, happily mitigating certain risks that had started to become evident to those enterprises which had jumped into public-cloud-only services with both feet. Those risks? The following have emerged as key considerations for LoB managers in recent times:

- **Agility –** The ability of public cloud to provision infrastructure and applications at pace cannot be doubted. But fast provisioning does not always represent true agility – particularly at the point where early-stage experimentation gives way to putting an application into full production. Public cloud providers can provision quickly because they use a 'one-size-fits-all' approach – and while this may be fine in some cases, in others it can lead to delays further down the line as a service proves to be inadequately suited to the in-production requirement. True agility comes from understanding the business requirement and then delivering the best solution against it. As knowledgeable consultants to your LoB, the in-house IT department should be the natural first port of call in these discussions.
- **Cost –** The public cloud is cheap… right? In fact, standalone public cloud services can prove to be more expensive than running IT from hybrid or on-premises infrastructure, especially when it comes to moving data around or extracting it. And don't just take our word for it – marketing software company Moz is on record as saying it switched from Amazon Web Services to its own private cloud due to cost and saved $3.4m. Not only is Moz saving money, but they have also reported increased reliability and efficiency1.
- **Performance, reliability and standards-based IT –** Let's face it, regardless of what LoB you work in, these are three of the most important long-term qualities that you will need from an IT resource. The dedicated focus of an in-house IT department will answer these needs more effectively than any generic public cloud service provider. This is because the IT department knows exactly what you need, right down to the workload level, and can therefore help architect a solution – or broker one from a public cloud provider – that exactly meets the business requirement, using the most appropriate technology (whether that is a public cloud or private). That's why we advocate a hybrid, best-of-both-worlds approach. Every workload has its place and it is increasingly the job of the IT department to make the appropriate match.
- **Simplicity –** One of the public cloud's primary strengths is that it is so simple. Simple to have provisioned and simple to consume. However, because of the need for due diligence around security, privacy, regulatory compliance, resilience and business continuity, at times the public cloud can add complexity. Many LoB managers do not have the time, resources or expertise to undertake this due diligence effectively, potentially leaving themselves open to issues further down the line. The IT department is experienced in accounting for these requirements, and can ensure these considerations are properly and quickly addressed before rolling-out a new application or service. Opting out of the checks and balances is not an option, though. The consequences of a security breach or failed compliance investigation will be extreme both for the organisation and the individuals involved. By working with the IT department with a clear governance approach in place, these pitfalls can be avoided.

The new generation of businesses especially the ones 'born of the cloud' are driving this change in expectations, thereby making it critical for businesses to redefine themselves in order to adapt and remain relevant. In a recent survey done by EMC, 76% of businesses in India think that SMAC has changed consumer expectations, so it becomes critical that they systematically explore the longer-term implications of an age in which information is at the center of everything we do.

Public cloud has a strong role to play in the future of IT but it is important that managers see it for what it is: not a panacea, but a key part of an optimal, hybrid IT infrastructure which, crucially, must be managed by experienced brokers in the in-house IT department. This hybrid approach fosters agility, the best TCO and the ability to manage important workloads on-premises as required based on performance, cost, security and compliance considerations. It is, in short, the best of both worlds, delivering agility and flexibility but on a foundation of security, control and bespoke tailoring to the business' specific needs. □



**Anantharaman Balakrishnan**
Country Head, EMC Global Services India

*"In a recent survey done by EMC, 76% of businesses in India think that SMAC has changed consumer expectations, so it becomes critical that they systematically explore the longer-term implications of an age in which information is at the center of everything we do."*

# DCIM: A Key to Good Customer Service

Dealing with large volume of unstructured data that is received as a result of the use of new digital channels and devices is a logistical nightmare. A centralised and streamlined system along with digitisation of information goes a long way in easing the pain



– Cassio Vaquero, Regional Director, Information Management Division-Asia Pacific and Latin America, Kodak Alaris

The financial services industry is faced with unprecedented challenges on a day to day basis due to changing regulations, economic pressures, high customer expectation and constant data deluge. With customers now expecting accuracy and responsiveness across all channels 24/7, an inability to meet their expectations can have a far-reaching impact. This can not only result in loyalty being lost but also dissatisfaction spreading in social media. According to the State of e-Marketing India 2015 report, the biggest change in recent years has come in terms of customer retention, which has increased steadily from 11 percent in 2011 to 20 percent in 2015 – making it a primary goal for marketers. The pressure is on institutions to distinguish

themselves through consistent, reliable delivery of exceptional customer service, and maintain a competitive edge whilst remaining within tight regulatory standards.

## Strict compliance demands

One of the challenges, faced by the financial sector is that of meeting stringent compliance demands. If one takes an insurance company for example, there are numerous claims that would need to be disbursed on a day to day basis. If files and documents are not managed in an organized and orderly manner, it could result in data being lost and thereby an unhappy customer. Insurance companies often encounter difficulties likeoperational costs, service levels, achieving claims management, efficiencyetc. that result in significant damage to an organization's budget sheet and irreparable damage to its reputation. This calls for information management solutions that can help streamline critical processes and can assist in ensuring compliance.



*"Globally nearly 15% of office floor space is taken up by filing cabinets. Paper documents impact efficiency and results in loss of time and would require it being stored in an organized manner."*

## Driving efficiency and cost reduction

Another key focus and challenge for the financial sector is driving efficiency and cost reduction. Globally nearly 15% of office floor space is taken up by filing cabinets. Paper documents impact efficiency and results in loss of time and would require it being stored in an organized manner. When not managed correctly, paperslows down processes and information is difficult to share. A solution wherein the documents are scanned and stored will particularly benefit organizations. The staff getsmore productive if they could find information and documents as quickly and easily as they find information on the web.

## New technology, threats and opportunities

Embracing new technology, is another important aspect, which plays a key role in an organization functioning smoothly. It is imperative that every company constantly upgrades to superior IT systems and infrastructure to improve its operational efficacy and maximise its IT investment. In addition, competition is fierce in the financial sector. Firms are now focussing on digital customers who are using the latest digital channels like banking via smartphones and tablets for their work. A newest addition to this listis the use of video advice and live chat which are also being explored by organizations.

## Managing data flow and customer expectations

Dealing with large volume of unstructured data that is received as a result of the use of new digital channels and devices also presents a logistical task in itself. This is a challenge from both an individual customer's view and intelligent information management perspective. Smartphones, Text Wireless Internet, email, web and social media are part of any organization's paper capture as is telephone for customer interactions. So it is important that there is real time access available to such data as this kind of information is important to gain both agility and speed to remain competitive. To achieve this, a centralised and streamlined system along with digitisation of information are essential to get a complete overview.

## Benefits and The Way Forward

Document capture and data management help in reducing processing costs. These solutions can play a huge role in not only improving customer service but also enhancing an organization's reputation in the eyes of its shareholders. Ithelps organizations make informed decisions faster and free up valuable time to seek new business opportunities. Globally, such competent platforms and solutions will see a steep demand in the near future as enterprises and corporations will be seeking to push the boundaries of technology and find ways to manage the ever expanding volume of data in a systematic fashion. In conclusion, to succeed, organizations will have to adjust and be flexible in accordance with the ever changing customer behaviours and implement a solution that seamlessly manages all inputs and documents. □

# Pushing the limits: The App Ecosystem

The world is fast moving from e-commerce to m-commerce. We're already accessing social media, shopping, banking, bill payments, entertainment and trading stocks on mobiles, and the market is only set to expand and grow from here

– Keshav Bansal, Director, Intex Technologies

India is characterized by a high service dearth that ICT industry can potentially upgrade. Access and inclusion to basic services that include healthcare, education, agricultural information and finance are vital to uplift Indians out of deficiency and empower them into being self-sufficient agents. Given that India's tele-density is well over 70% and that mobile telephony is the one technology that has stretched nearly all income strata, there is prospective to use India's mobile backbone to enable a host of presently unmet demands.

## Mobile penetration pushes mcommerce in India

Recent research reports show that India, the fastest growing smartphone market globally, has over 250million smartphone users and over 350 million Internet users. Of the 350 million, over 60% users access Internet through mobiles. This clearly indicates the next wave of growth in Internet penetration will be driven by adoption of Mobile Internet. Moreover, around 9 billion apps will be downloaded in India in 2015, more than five times the number of apps downloaded in 2012 (1.56 billion) at a cumulative annual growth rate (CAGR) of 75 percent.

It is extensively approved that India is now at the verge of entering the second phase of its telecommunications revolution which is positioned on content. India's connectivity should be subjugated to provide content that allays informational irregularities, helps indenture creation and implementation, and simplifies lives of its people as well as comforts the processes of its administration agencies and business enterprises.

App development, distribution and demand are the three essential features for the success of the app economy and their expansion depends on the system infrastructure, policy framework, operational system, consumer strategies and socio-economic conditions.



**Keshav Bansal**
Director, Intex Technologies

*"Over 250 million smartphone users and over 350 million Internet users. Of the 350 million, over 60% users access Internet through mobiles. Around 9 billion apps will be downloaded in India in 2015, more than five times the number of apps downloaded in 2012 (1.56 billion) at a cumulative annual growth rate (CAGR) of 75 percent."*

## $143 bn global app economy

The world is fast moving from e-commerce to m-commerce. We're already accessing social media, shopping, banking, bill payments, entertainment and trading stocks on mobiles, and the market is only set to expand and grow from here. In India app growth is led by factors like mounting mobile Internet penetration, cheaper smartphones, and mobile-ready regional content have led to the growth of this ecosystem. According to Internet and Mobile Association of India (IAMAI), India is expected to have the largest number of software developers by 2017. It has around 300,000 app developers and is already the second largest Android developer community in the world after the U.S. Having said that, there still are a number of key building blocks necessary for facilitating a robust mobile application ecosystem. Many of these are now in place, and the stage is set for mobile applications to become a primary engine for driving up new mobile data usage.

Burgeoning smartphone and mobile internet usage, a growing developer community and the potential for regional / localised apps are surely to favour an app revolution in India in near future. As per IAMAI, increase in local language content will lead to a growth of 39% in internet user base, with rural India being the primary driver of this growth (75%) and urban India to grow at 16%.

The global app economy was $53 billion in 2012 and is expected to rise up to $143 billion by 2016 at a growth rate of about 28 %( App economy forecasts 2013-2016 report). To truly move forward, the Indian app ecosystem must start acknowledging its essential role and emphasis not only on gaining international keenness through enhanced user interface design but also on catering to the 1.3 billion citizens that reside within India. □

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# Using YARN in the MapReduce Programming Tool

Part 3: **BIG DATA TUTORIAL**



Through this article, let's take a quick look on the limitations of MapReduce V1.0, a part of Hadoop since 2007, and the resultant improvisation to overcome the same

- Narayana Murthy Pola, Sr. Project Manager, DST India

Over the last couple of months, we were discussing Hadoop and its components. We also discussed the need for Hadoop and its Execution engine(Map Reduce programming Paradigm).

In this article, let's just take a quick look on the limitations of MapReduce V1.0 i.e. when Hadoop was introduced to the world in 2007,what was the resultant improvisation to overcome the same.

A Job run in a typical MapReduce v1.0 consists of four components

- Client which submits the job
- Job tracker that runs the job
- Task tracker which runs the tasks that were split into from the submitted jobs such as mappers and reducers
- HDFS(Distributed File system) used for sharing job files

Job tracker (as discussed last month) is responsible for both, managing the cluster's resources and also to drive the execution of the MapReduce job.

With this approach, developers and practitioners started to encounter the following limitations:

**Scalability:** Job Tracker runs on single machine performing several tasks. These include

- o Resource management
- o Job and task scheduling
- o Monitoring

With Very large clusters typically the size of 4000 nodes and higher, developers experienced an inconsistency in the MapReduce system. The most common kind of failure that was observed is the cascading failure. This in turn could cause the overall cluster to deteriorate while trying to overload the nodes or replicating the data via network flooding.

**Availability:** Job Tracker is the single point of availability.All jobs have to restart upon its failure.

**Resource utilization:** There is a concept of fixed Map slots and reducer slots for each Task trackers.This leads to in-effective resource utilization as the Reducer slots may be left Un-utilized while Mappers slots are full.

**Multi-Tenancy:** Since the resource management and Map Reducer execution engines are tightly integrated, it is impossible to run non-Mapreduce applications and frameworks on Hadoop clusters.

Attempts to overcome the above said limitations resulted in the development of YARN and MapReduce 2.0./ Hadoop 2.0

**Yet Another Resource Negotiator (YARN)** has taken over the responsibility of cluster management from MapReduce. Now MapReduce just takes care of the data processing. In the new improvisation, MapReduce on YARN has the following components

- Client that submits the MapReduce job
- YARN resource manager that coordinates the allocation of computer resources on the cluster
- YARN node managers which launch and monitor the compute containers on machines in the cluster
- MapReduce Application master which coordinates the tasks running the MapReduce job.
- HDFS (Distributed File System) which is used for sharing the job files between the entities

In effect, YARN splits the two major functionalities of

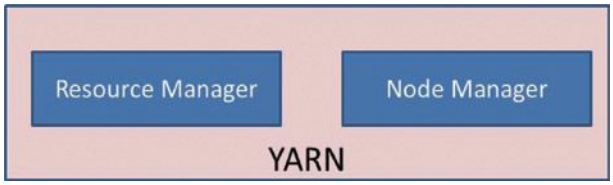


**Narayana Murthy Pola**
Sr. Project Manager, DST-India

*"YARN splits the two major functionalities of the JobTracker i.e. resource management and job scheduling & monitoring into 2 separate components."*

the JobTracker i.e. resource management and job scheduling & monitoring into 2 separate components.

- o Resource Manager
- o Node Manager(node specific)

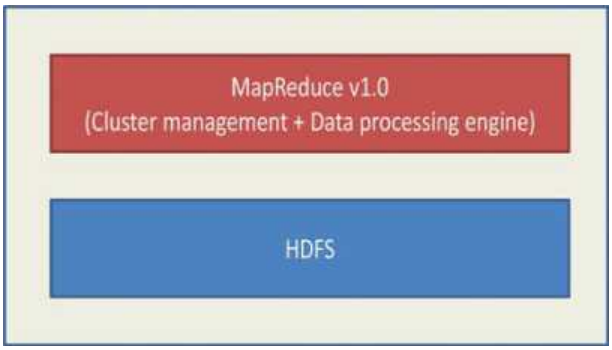


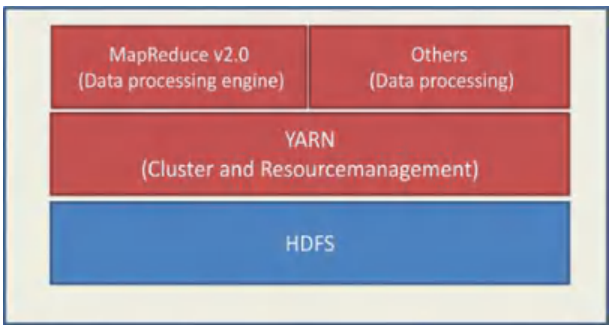

Application master and MapReduce tasks run in containers that are scheduled by the resource manager and are managed by the node managers that ensure the application does not use more resources than it has been allocated.

In contrast to Job tracker each instance of an application (a MapReduce job) has a dedicated application master which runs for the duration of the application.

YARN overcomes the above mentioned limitations (i.e. Scalability, Availability)and does efficient utilization of resources.Multiple applications both MapReduce and non-MapReduce applications can co-exist on YARN.

MapReduce 2.0 has overcome many limitations of MapReduce 1.0 paving way for numerous applications and




tools developed on Hadoop, useful in varying domains and walks of life. Next month let us see some of the tools developed on Hadoop/MapReduce increasing Hadoop/MapReduce's effectiveness and usability. □

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# MAXIMUM MOBILITY!

Expert advice and handy tips for any organization to quickly embrace mobility; Hand-picked 50+ mobile apps to get you started with CRM, private messaging, data backup, security, productivity and much more.

- Adeesh Sharma

Mobility as a concept and the associated platforms and tools that help foster its growth have been in the limelight since the past few years, and for good reason. The ever plummeting prices of smartphones have offered affordability in the hands of the end user and also raised the clamour to get the maximum productivity out of them. We take our smart phones everywhere we go, and with their powerful processors and 4G capability, they can be used as personal assistants and for productivity aids.

One of the major reasons enterprise mobility has the potential to be so powerful for employees or field executives is because the mobile device allows itself to be transformed into many different situations, in the context of an employee's normal activities. For example, a wholesale or retail owner can access product catalogue in real time to show to their customers, or a factory worker can report a failure with machinery at the point of discovery. Mobile solutions can deliver all these benefits if the right applications, devices and business processes are implemented - enabling communication, information access, and business transactions anywhere, anytime. Through this story we look at the latest developments in the Enterprise Mobility space: BYOD platforms, mobile security tools, CRM and backup tools, enterprise messaging apps, mobile app development platforms, and more. Let's take a look.

## Free BYOD tools to reduce risks and enhance productivity

In the current age, most of the people are using a smartphone for both personal and professional purposes. A variety of OS available for these devices only complicates matter for security admins. In the BYOD concept, several breaches are possible and if you want to be ready to fight them then there are a few key precautions to follow. For instance, always use password protected access controls, which may seem obvious, but setting a password/ PIN is a critical first step in BYOD security that many users choose to ignore. Most of the devices come with built-in access

control features. Users should optimize the access control and app permission settings so that each application can access only what it needs to function and nothing more.

## Backup Apps to Keep Your Data Safe

Whether you are using your device for personal or professional use, your data is always precious for you. It's a smart choice to have the backup of all your device's data so that you can get them in the case of theft or damage.

CM Backup is a tool that can be used to back up device data such as contacts, messages, call logs, bookmarks, calendar info, alarms, and user dictionaries. Using Helium, you can backup and restore your apps to your computer or your device depending on your preferences. You can also sync apps between Android devices and backup to and restore from cloud storage (Dropbox, Google Drive, and OneDrive).

## Enterprise Messaging Apps

In the mobility era, almost every employee and employer is looking for the best way to be in touch. Nowadays, communication is not only calls over the phone, it means a lot more and new age communication apps are taking it to a new height. Jive Chime allows employees and employers to start a conversation anytime and anywhere. You can get the answers you need, when you need them. Cisco Jabber is made for quick conversations. This app provides presence, instant messaging (IM), voice, voice messaging, and video calling capabilities on Android devices.

## Free Mobile CRM Apps

With businesses focusing towards mobility solutions and mobile customer relationship management solutions in focus, we decided to check the most popular ones available and compared them on features. Sugar Professional is made for Apple's iPhone and iPad. It simplifies the access and interaction with customer data while on the go and allows users to log calls made on the mobile phone via the Mobile app. SAP Business ByDesign provides intuitive and comprehensive mobile CRM solution. From your mobile phone, you can navigate the entire ERP and CRM system, modify your views, check inventory availability at multiple locations and create new sales orders. Zoho CRM Mobile Edition gives you the option to access and work with your online Zoho CRM data from your mobile devices. The Zoho CRM native app is available for the iPhone, iPad, and Android phones.

## Best Platforms for Building Mobile Apps Without Coding

If you have a small business or website or you want to create, your own mobile app but don't have the coding knowledge then you could try these platforms, where you can develop your own app and offer your customers a dedicated mobile experience. Appery is one such platform which is based on cloud and allows you to build your app without coding. You can use it to create apps for Android, iOS and Windows Phone. Mobile Roadie allows you to create an app for iOS and Android platform. You can easily launch iOS and Android apps on the cloud platform that supports anytime content updates, geo-targeted marketing campaigns, user analytics, push notifications and more. Good Barber provides a platform to build iPhone and Android apps. Along with native apps, you have a free web mobile version, which users access from their phones' browsers.

## Popular mobile productivity apps

The portability offered by mobile devices and the ability to capture data in real time helps in boosting productivity and process improvement. From note-taking apps and mobile office suites, to calendars, timers and to-do lists, the productivity apps can be installed on your iOS or Android device. Microsoft's Office suite of programs has long been a defacto standard for desktop productivity, and the mobile versions of Word, Excel, and Powerpoint continue that tradition. Cloud support for services such as OneDrive, Drive and Dropbox make for easy sharing and collaboration. Freedly mobile app merges the best of multiple interfaces, with a text-only list view for quick browsing through your news feed and uses different layouts for a more visual treat. Feedly lets you organize all your favorite publications, podcasts and YouTube channels into collections and receive updates when new stories and videos are published. Workflow is an iOS task automation app that connects apps and actions together to automate things you do on your device. Google's cloud storage service, Google Drive, serves as a great productivity aid due to its tight integration with the Google ecosystem. Users can easily upload and download any file, plus the file sharing and collaboration features let you easily work on shared projects effectively.

## In conclusion

The mobility landscape will evolve rapidly and will not limit itself to smart phone and tablets. Wearable tech such as Google Glass, is all geared up to create even more opportunities for employees to access the digital workplace.

Given the fluidity of enterprise mobility, as well as the many current associated benefits, enterprises need to stay focused on identifying their needs and taking a step-by-step approach to realize full benefits. □

# Build Mobile Apps Without Any Coding

If you want to ride the mobility wave with your own mobile apps, but the fear of learning to code first keeps you away, then you needn't worry any more. Here are 10 platforms to create mobile apps without any knowledge of coding

- Raj Maurya

## 1. Appery.io

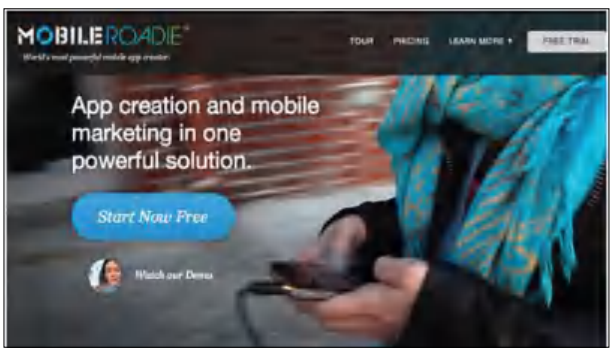
Appery is a platform which is based on cloud and allows you to build your app without coding. You can use it to create apps for Android, iOS and Windows Phone. It includes Apache Cordova (Phone Gap) with access to its built-in components. You can connect to any REST API and create your own private plugins to use in your apps.




**Price:** Plans start for free and go up to $180 per month for premium edition

## 2. Mobile Roadie

Mobile Roadie allows you to create an app for iOS and Android platform. You can easily launch iOS and Android apps on the cloud platform that supports anytime content updates, geo-targeted marketing campaigns, user analytics, push notifications and more. The API support multiple languages and you can pull your data in a various format, including XML, JSON, PHP, CSV, and HTML.




**Price:** Plans start at $149 per month (Core) and go up to $799 per month (Pro).

## 3. TheAppBuilder

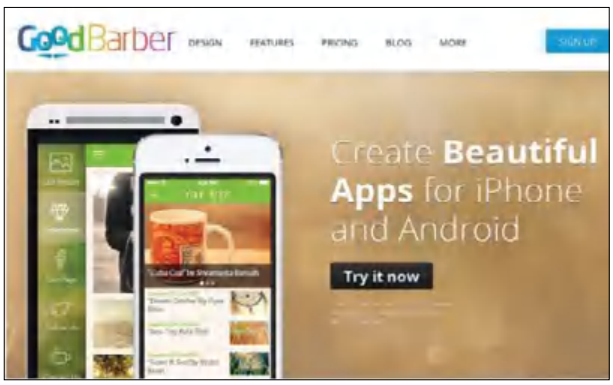
It features a simple HTML5-based user interface that lets you create an app by choosing and populating some widgets — like RSS feed, webpage, Twitter, Facebook, news, photo gallery, Web page, List etc. With less than 30 minutes of training, you will be able to maintain an app by updating its content and structure through the non-technical content management system (CMS).




**Price:** Price available upon request

## 4. Good Barber

Good Barber provides a platform to build iPhone and



Android apps. Along with native apps, you have a free web mobile version, which users access from their phones' browsers. You can also organize your app and add sections ranging from videos, photos, sounds, live events and more. Price: Plans start at $16 per month and go up to $32 per month for the full plan

## 5. Appy Pie

Appy Pie allows users to create mobile apps in categories including gaming, e-books, and more. Appy Pie allows users to monetize their apps through iTunes & Google Play, send push notifications, view app stats with Google Analytics, take appointments with appointment scheduler page, and embed custom HTML code with a code page. Once your app has been developed, you receive an HTML5-based hybrid app that works with all platforms, including BlackBerry.




**Price:** Plans start at free and go up to $33 per month for platinum version

## 6. AppMachine

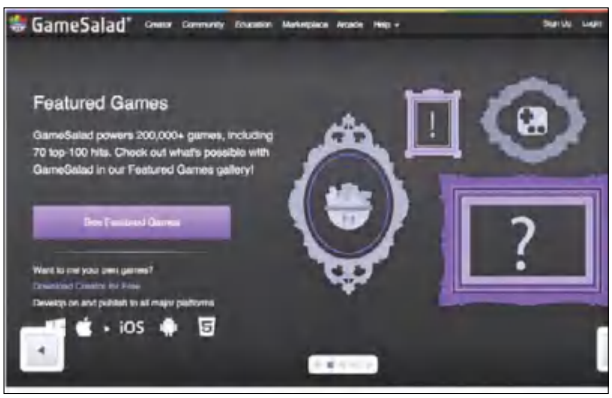
It lets you build and design professional native apps for both iOS and Android. With a drag-and-drop interface, you can combine different features, such as information, photos, and videos. It also lest you link your app to Facebook, Twitter, or online stores. You can design the app in your own unique style and choose your navigation paths, colors, fonts, and icons. AppMachine takes care of everything you need to get your app into Apple's App Store and Google Play.

**Price:** Plans starts from $19 and go up to $69 (designer version).




## 7. GameSalad

GameSalad Creator is an authoring tool primarily aimed for composing games in a drag-and-drop fashion, using visual editors and a behavior-based logic system. It is used by consumers and creative professionals such as graphic designers, animators, and game developers without the knowledge of coding. The application runs on Mac OS X for producing games for iPhone. It also runs on Windows which is optimized for producing games on Android devices although games developed on Windows have to be converted to Mac OS files to be published to the App Store, web browser-based content in HTML 5, and Android applications.




**Price:** Plans start at free and go up to $299 per year for Pro edition.

## 8. BiznessApps

BiznessApps provides a platform to help create mobile apps for businesses with features such as food ordering,



shopping cart, loyalty programs, dynamic content, third party integrations, push notifications, comprehensive analytics and more. There are also real-time previews to check your progress as you design and develop your app.

**Price:** Plans start at $29 per month for mobile website and go up to $59 per month for mobile apps

## 9. AppMakr

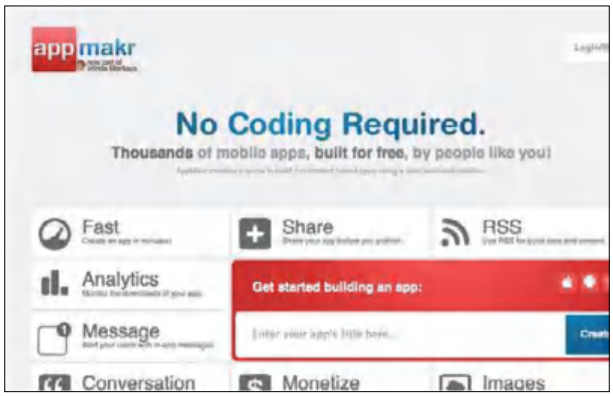
AppMakr's platform uses RSS and API integrations to power the content in a creator's app. This content may include text, images, podcasts, audio, and video. Creators can also add location-aware GeoRSS and Media RSS feeds. Additionally, the platform allows in-app HTML5 and CSS3, which serves locally from the mobile device and can access its camera, accelerometer, and other built-in features. Within the editor, creators can customize the look of their apps by designing their icons, splash screens, headers, and tab icons. If creators do not want to design graphics themselves, the platform presents a database of icons to choose from and culls images from related web searches.

**Price:** Plans start at free and go up to a $9 per month.

## 10. ShoutEm

ShoutEm offers an app builder with maintenance, free updates, and upgrades. The interface builder offers integrations of Wordpress, Drupal, Ning, Facebook, and Twitter. It provides multiple options that help you quickly create a revenue stream from your app, providing an e-commerce experience, in-app subscriptions, deals, and coupons, with support for all major ad networks included.

**Price:** Plans start at $19 and go up to a $119 per month. □









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# 20+ Free Tools to secure, backup, and empower Smartphones

We provide some tips to secure your smartphones along with our top selection of security, backup, and enterprise messaging tools

- Ashok Pandey

In the current age, most people are using a smartphone for both personal and professional purposes. A large number of OS available for these devices only complicates matter for security admins. Each smartphone is at security risk though there could be debates whether you require security apps or need to add more policiesj. We suggest a mix and match approach.

Since the introduction of BYOD concept, plenty of employers and employees have benefited from it. But, no one can deny the risk associated with it, as BYOD can lead to data breaches and increased liability for the organization.

## 6 Tips to Secure Devices and Reduce BYOD Risks

In the BYOD concept, several breaches are possible and if you want to be ready to fight them then these 6 tips should serve as a best practices guide for end users and IT/security teams alike.

- Always use password protected access controls, which may seem obvious, but setting a password/ PIN is a critical first step in BYOD security that many users choose to ignore.
- You should keep your Wi-Fi and Bluetooth turned off when not in use. Use secure wireless network, and only connect your device to trusted networks.
- Most of the devices come with built-in access control features. Users should optimize the access control and app permission settings so that each application can access only what it needs to function and nothing more.
- Ensure to keep your OS, firmware, software, and applications updated in real-time, as software updates often contain security patches to protect users from the latest threats or exploits.
- You should periodically back up the device's data, this will greatly reduce the fallout should a device be lost or stolen.
- You should enable anti-theft, find my device and remote wipe services, this will enable you to track a missing device, and wipe a device's data remotely in the event of a lost or stolen device.

## 6 Best Security Apps for Mobile Devices

As the risks are increasing day-by-day, developers are also improving their apps to keep pace with the new threats. Still new threats keep emerging. So, to protect against them, there are plenty of security apps available, and you might get confused choosing the best one for your needs. So, here are 6 best apps to secure your smart-device.

**360 Security (Platform: iOS/Android)**

The latest 360 Security app has several new features to



secure your device from threats. It has a good blend of usability and protection. It offers smooth performance and a host of extra features as well. It also optimizes your background apps, memory space, junk (cache) files and battery power, while keeping your device safe from viruses and trojans. This also has an anti-theft solution that includes, Erase, Locate, Alarm and Lock features that assist you with retrieving a lost device and protecting personal data. You can scan installed apps and local APK files in real time and also monitor each installation process.

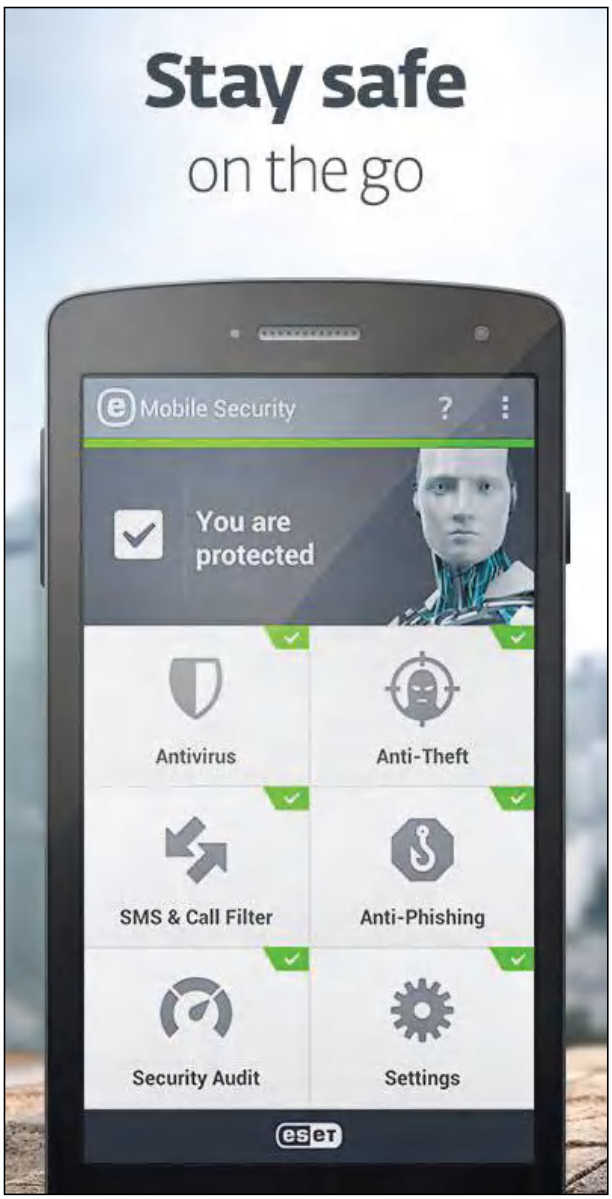
**Avast Mobile Security & Antivirus**

Avast Security app is offering an impressive range of tools. It has anti-virus protection, it scans your apps to provide details on what they are doing, and it has a Web shield that scans URLs for malware. If you have a rooted device then there's also a firewall that allows you to control network traffic. You can block access to Wi-Fi or the network for specific apps which is handy for security and potentially saves battery juice as well. It also bundled with an anti-theft feature that lets you locate your lost device, control it remotely, and much more.



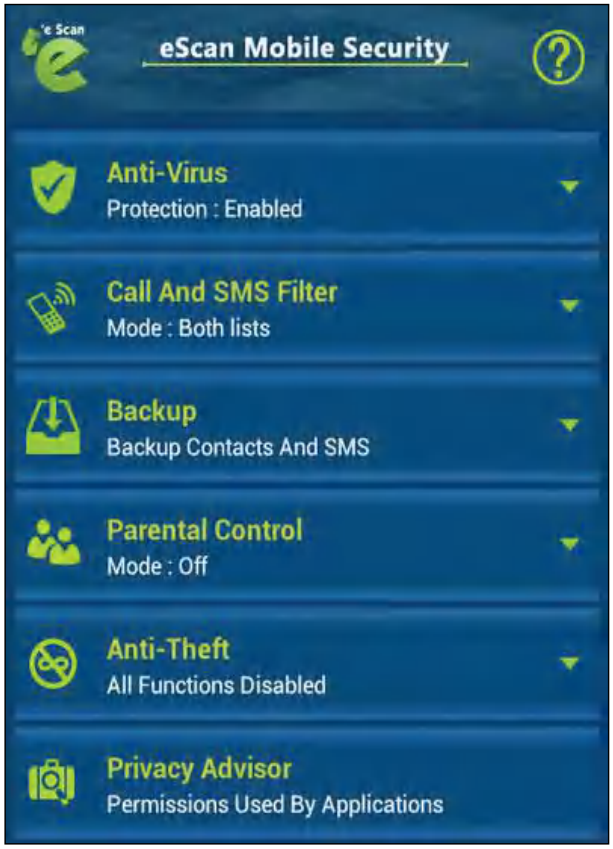

**ESET Mobile Security & Antivirus**

With the strong detection rate, this security app has an easy-to-use interface. The app comes with a suite of anti-theft tools. This enables you to remotely locate and lock your smartphone or tablet, and you can prevent anyone from uninstalling apps using password protection.




**eScan - Mobile Anti-virus**

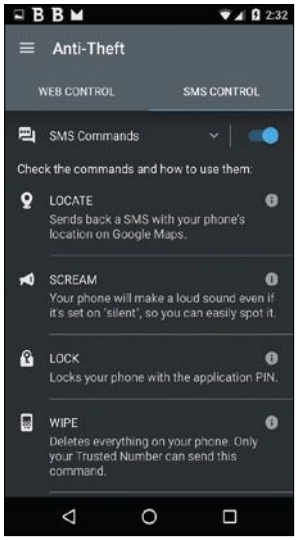
eScan Mobile Anti-virus and Security for Android protects your device against evolving cyber threats, thus ensuring you its uninterrupted usage. It restricts unauthorized




access of data, in case the device is lost or stolen. It allows remote blocking, data wiping, SIM watching and even helps to locate the phone through GPS finder. Also, the app comes with parental control featuring enabling you to block specific websites and applications.

**Bitdefender Mobile Security & Antivirus**

This is a powerful yet light and fully featured security app. Bitdefender Mobile Security & Antivirus app offers flawless malware protection and robust privacy protection. It incorporates Android Wear watches into its anti-theft features. It's "Web Security" detects malicious content and keeps your browsing safe. It also features Anti-Theft that enables you to lock, geo-locate, sound an alarm, and wipe your Android from any Internet-connected device.




**McAfee Security & Anti-virus**

McAfee has several impressive features with an intuitive interface. This easy to use app offers anti-theft and privacy-protection features. This protects and enhances your smartphone or tablet's performance with anti-theft, find the device, app privacy protection, anti-virus, performance optimization, and security features from Intel Security.




## POPULAR MOBILE SECURITY SOFTWARE AND THEIR FEATURES

| Mobile security software | On-demand scan | On-access scan | Firewall | Anti-Spam | Web protection | Privacy Advisor | AntiTheft | Call/SMS Filtering | Backup | Price |
|---|---|---|---|---|---|---|---|---|---|---|
| 360 Security | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | Free |
| Avast Mobile Security & Antivirus | ✓ | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | Free |
| ESET Mobile Security & Antivirus | ✓ | ✓ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | ✗ | Freemium |
| eScan - Mobile Antivirus | ✓ | ✓ | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | Free |
| Bitdefender Mobile Security & Antivirus | ✓ | ✓ | ✗ | ✗ | ✓ | ✓ | ✓ | ✗ | ✗ | Free |
| McAfee Security & Antivirus" | ✓ | ✓ | ✗ | ✗ | ✓ | ✓ | ✓ | ✓ | ✓ | Freemium |

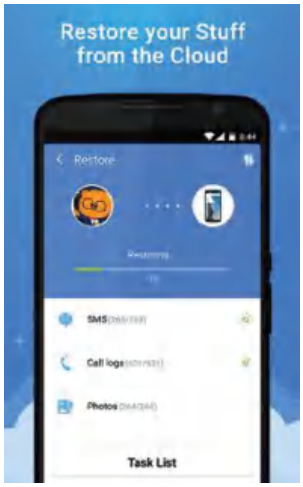
## 4 Best Backup Apps to Keep Your Data Safe

Whether you are using your device for personal or professional use, your data is always precious for you. It's a smart choice to have the backup of all your device's data so that you can get them in the case of theft or damage. Here are some of the four best backup apps to help keep your data safe.

**CM Backup**

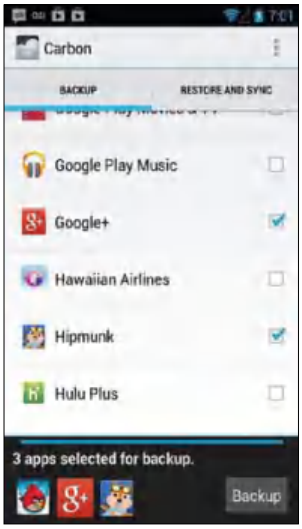
CM Backup can be used to back up device data such as contacts, messages, call logs, bookmarks, calendar info, alarms, and user dictionaries. It also offers a cloud solution so you'll be backing up to their cloud and restoring from there. Using the web interface, you can manage your backups. You can enable the 'Scheduled backup' to automatically backup important items every day.

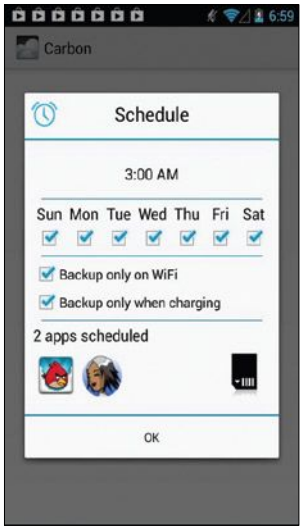



**Helium**

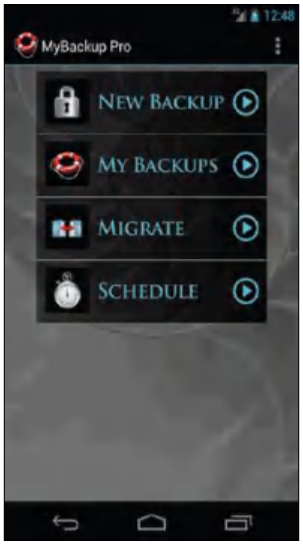
Using Helium, you can backup and restore your apps to your computer or your device depending on your preferences. You can also sync apps between Android devices and backup to and restore from cloud storage (Dropbox, Google Drive, and OneDrive). It lets you backup your apps and data to your SD card or cloud storage.

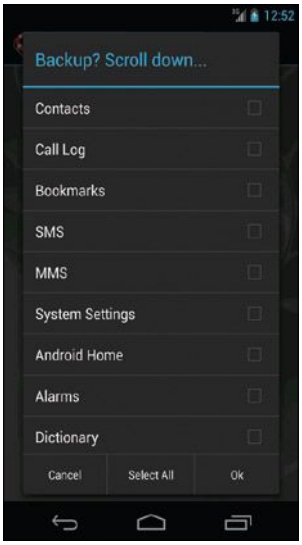



**MyBackup**

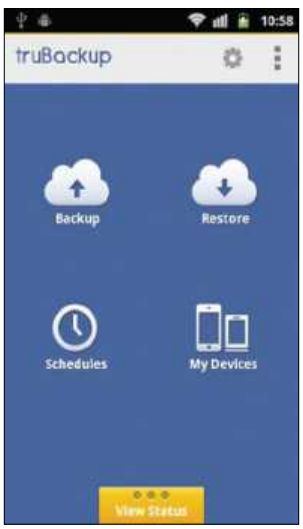
MyBackup enables you to back up your apps, photos, music, videos, and the usual assortment of stuff like call logs, SMS, and system settings. You can backup to your device or external SD card. You can also schedule multiple automatic backups with this app.

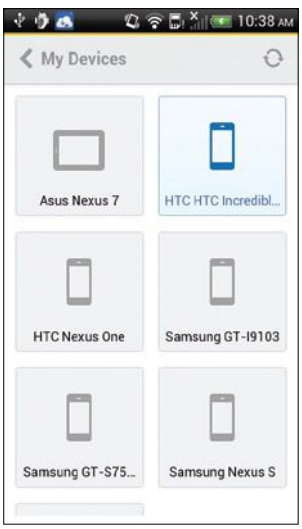



**truBackup**

The simple backup solution "truBackup" does the usual stuff along with apps and music which sets it apart from most of the others. The app enables a user to schedule the backup as well as the option to upload the data to various cloud storage sites along with the external SD card.



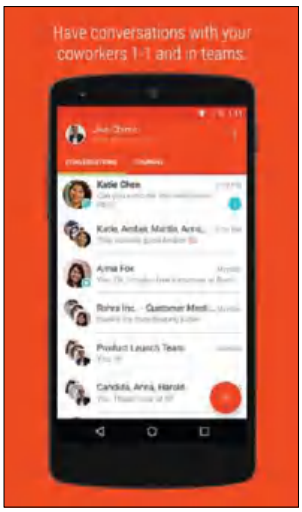



## Top 4 Enterprise Messaging Apps

In the mobility era, almost every employee and employer is looking for the best way to be in touch. Nowadays, communication is not only calls over the phone, it means a lot more and new age communication apps are taking it to a new height. Here we brings four best enterprise communication apps for you...

### Jive Chime

Jive Chime allows employees and employers to start a conversation anytime and anywhere. You can get the answers you need, when you need them. With one-to-one and group messaging, you won't have to waste time tracking people down, wait around for responses, or be tied to your desk.

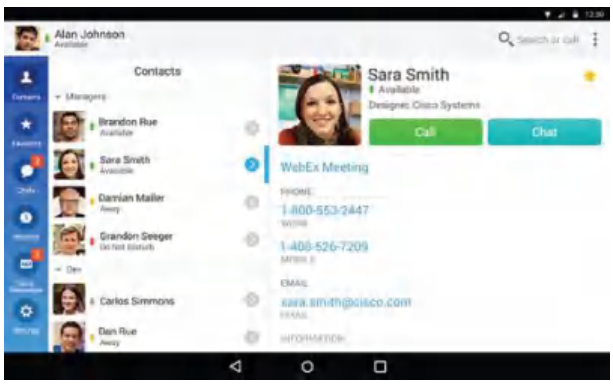






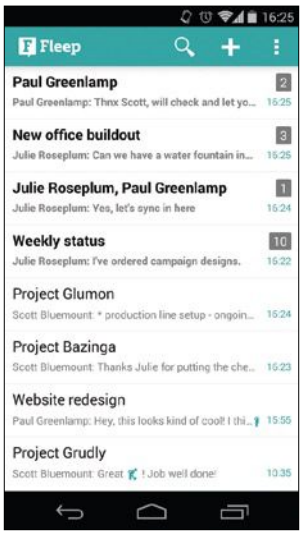
### Cisco Jabber

Cisco Jabber is made for quick conversations. This app provides presence, instant messaging (IM), voice, voice messaging, and video calling capabilities on Android devices. Escalate your Jabber calls into multi-party conferencing with Cisco WebEx Meetings. This integrated collaboration experience works with both on premise and cloud-based collaboration architecture.




### Fleep

Fleep app can make your life easier by empowering you to chat without boundaries, maintain your focus throughout the day and to work smarter. It is an easy to use enterprise communication app that simplifies your conversations by bringing all your team chats and business emails in one place. Fleep is perfect for teams or those working independently across a variety of projects.

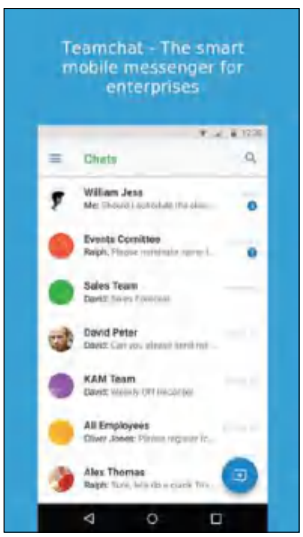


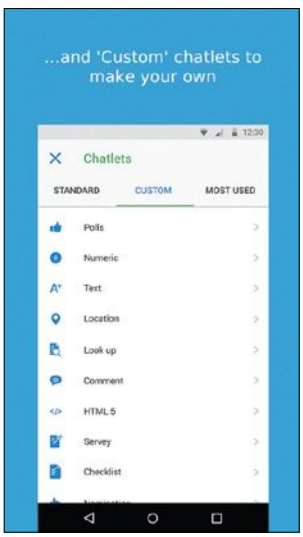




### Teamchat

The enterprise messaging app enables business to messaging among teams of any size by structuring the messages to reduce clutter. This is done through "smart" messages that aggregate, organize and summarize the responses, updating themselves without adding new messages to the conversation stream. Examples include polls, surveys, sales reports, registration forms, lookups and more. □




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www.pcquest.com
http://twitter.com/pcquest
http://facebook.com/pcquest
http://linkd.in/pcquest
http://gplus.to/pcquest
pcquest@cybermedia.co.in

# 10 Must Have Apps for Busy Executives

The world of smartphones has several powerful apps to be productive even while on the move. Here are our 10 picks that every busy executive should have on their smartphone

- Anuj Sharma

Gone are the days when mobile was used just for voice communication. Over the past few years we have noticed a higher degree of interest in the enterprise mobility sector be it with individual employees or digital workplace. We take our smart phones everywhere we go, and with their powerful processors and 4G capability, they can be used as personal assistants and for productivity aids. The same logic applies to tablets and phablets that give users more real estate for content creation and consumption.

## Benefits of using a mobile device in office

One of the major reasons enterprise mobility has the potential to be so powerful for employees or field executives is because the mobile device allows itself to be transformed into many different situations, in the context of an employee's normal activities. For example, a wholesale or retail owner can access product catalogue in real time to show to their customers, or a factory worker can report a failure with machinery at the point of discovery.

Mobile solutions can deliver all these benefits if the right applications, devices and business processes are implemented - enabling communication, information access, and business transactions anywhere, anytime.

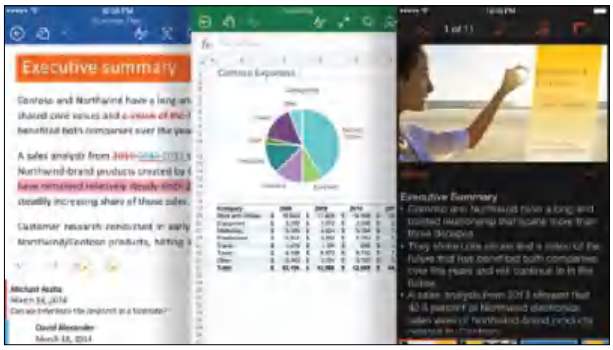
From note-taking apps and mobile office suites, to calendars, timers and to-do lists, here are our favorite productivity apps that you can install on your iOS or Android device.

## 1. Word, Excel & Powerpoint (Android, iOS)

Microsoft's Office suite of programs has long been a defacto standard for desktop productivity, and the mobile versions of Word, Excel, and Powerpoint continue that tradition. Designed to provide maximum file compatibility and adopting to touch screen interface devices, each of the three apps allows users to view and edit documents, spreadsheets and presentations respectively. Cloud support for services such as OneDrive, Drive and Dropbox make for easy sharing and collaboration. To get the most out of the apps, use an

**KEY BENEFITS**

| Feature | Where you can use | Benefits derived |
|---|---|---|
| Portability | Using the device on a manufacturing floor or while on the move | Extending digital communication to all employees, leading to more engagement and involvement |
| Capture data in real time | Recording inspection data in real time direct to systems rather than having to enter the data later as a separate process via the desktop | Improved accuracy of data; better productivity; business intelligence in real time |
| System independence | Delivering enterprise functionality quicker than a desktop equivalent | Improved Process efficiency; reduced costs |
| Geolocation | Using interactive maps for logging location-specific data | Process improvement; better productivity |
| Personal ownership of devices | Introduction of BYOD policies so employees use their own tablets or smartphones to access corporate systems | Reduced costs; higher adoption; better engagement |
| In-built camera | Scanning data such as QR codes in order to upload data into systems; recording of video and photos | Process improvement; better productivity |
| Sharing | Sharing a smartphone/tablet screen with a customer | Enhanced customer service; knowledge transfer and learning |
| Availability | Using the device to view content while in move; receiving updates instantly | Better productivity; access to critical knowledge delivered and read in real time |




Office 365 subscription which now comes bundles with many smart phones and tablets.

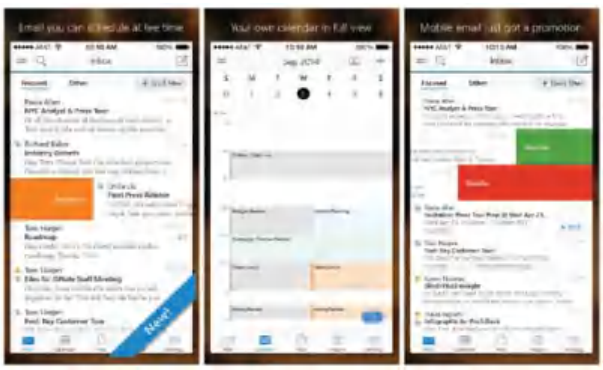
## 2. Freedly (Android, iOS)

The mobile app merges the best of multiple interfaces, with a text-only list view for quick browsing through your news feed and uses different layouts for a more visual treat. Feedly lets you organize all your favorite publications, podcasts and YouTube channels into collections and receive updates when new stories and videos are published. Users can sign up for topical updates from a variety of websites and blogs, or add custom subscriptions from sources like RSS. If you are a social butterfly, the app also integrates seamlessly with Facebook, Twitter, Evernote, Buffer, OneNote, Pinterest and LinkedIn so that you can easily share the stories you read in your Feedly account with your friends and colleagues.



## 3. Microsoft Outlook (Android, iOS)

Want to get the familiar Outlook email interface on your Android phone or tablet? Microsoft officially released its Outlook app for Android earlier this year. The app is a productivity powerhouse bringing your email, attachments, contacts and calendars into easy reach. The built-in analytic engine automatically pops up important email (across multiple accounts) based on your communications, and quick swipe controls allow you to easily archive or delete your email. The free app works with Microsoft Exchange accounts and also has in-built support for Office 365 and Outlook.com, along with third-party services like Gmail, Yahoo Mail, and iCloud. It has integrated Outlook calendar support as well, including a nifty native scheduling feature.



## 4. Workflow (Android, iOS)

Workflow is an iOS task automation app that connects apps and actions together to automate things you do on your device. For instance, calling for Uber rides to your next calendar event, uploading your most recent photos to your favorite cloud storage provider, and more. Users can easily create their own Workflow and open them within the app, or turn them into iOS Action Extensions or even add them to the home screen. The app supports more than 200 actions across a variety of apps, and users can share their creations to Workflow's Gallery feature.



## 5. Google Drive (Android, iOS)




Google's cloud storage service, Google Drive, serves as a great productivity aid due to its tight integration with the Google ecosystem. Users can easily upload and download any file, plus the file sharing and collaboration features let you easily work on shared projects effectively. Easy configuration of sharing settings, folder structure, quick access to recent files and details, and built-in viewing of documents, PDFs, photos and videos make for a versatile cloud storage tool whatever mobile OS you use. Drive starts you with 15 GB of free Google online storage, so you can keep photos, stories, designs, drawings, recordings, videos – anything.

## 6. Quip (Android, iOS)

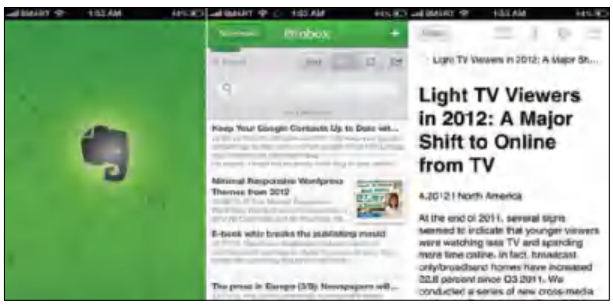
Quip allows you to integrate messages and edit collaboratively. Users can create, import and share documents, to-do lists, notes and more. You can then

collaboratively edit them as a group, with a built-in messaging sidebar that allows you to quickly get in touch with your colleagues as well as view their edits. Quip can import documents from a variety of sources such as Dropbox, Drive and Evernote, and export documents to PDF and Office formats.



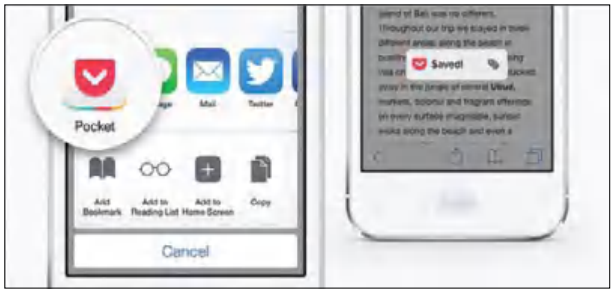
## 7. Evernote (Android, iOS)

Evernote is one of the popular cross-platform note-taking services, allowing users to take and upload notes, pictures, audio and video snippets and organize them into cloud notebooks that can be synced across different devices. Loaded with powerful organization, formatting and sharing options, Evernote is still king even with competitors such as OneNote and Google Keep. The free version lets users upload 60MB of content monthly, with paid accounts allowing more options.




## 8. Pocket (Android, iOS)

This nifty app lets you preserve almost any web page or content in an organised way and makes for a favorable viewing experience. Previously known as Read It Later, Pocket App is used for managing a reading list of articles and web content from the Internet. It gets integrated with your web browser so you can save content or a web page by simply tapping the icon near the top of the screen. It is a great offline reading tool that allows you to select and save articles, pictures and videos for later viewing.



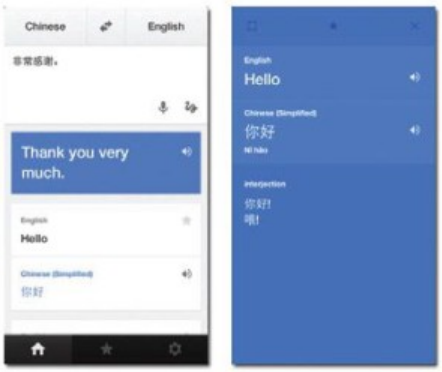

## 9. Expensify (Android, iOS)

Keeping track of expenses can be a pain while you are more on the move. Expensify can ease the burden. The app provides an easy-to-follow interface for tracking time, miles, receipts, and invoices on the go, then generating on-demand reports as needed. Expensify lets you scan receipts as you get them, after which it automatically pulls out the relevant info from the images and puts it into your records. It can tap into your phone's GPS to log miles as you drive, and it offers offline functionality for the times when you can't get a signal.




## 10. Google Translate (Android, iOS)

Going abroad? Google Translate is the companion you need. Translate makes it easy to convert text from one language to another in ways that actually make sense. Sure, you can type in a phrase in your native tongue and have Translate move it into another language. But you can also take a snapshot of a sign, menu, or document with your phone and have Translate convert it to the text. You can speak into your phone in one language and have Translate speak back in another. And you can do it all offline, provided you download the necessary language packs in advance.




## A look into the future

The mobility landscape will evolve rapidly and will not limit itself to smart phone and tablets. Wearable tech such as Google Glass, is all geared up to create even more opportunities for employees to access the digital workplace.

Given the fluidity of mobility, as well as the many current associated benefits, enterprises need to stay focused on identifying their needs and taking a step-by-step approach to realize full benefits. □

# 12 Popular Mobile CRM Apps

You can't manage your customers by just sitting in office. Here are some really great CRM tools that will empower your sales force while they're on the move

- Raj Maurya

## 1. Sugar Mobile

This app is an extension of the Sugar Professional or Enterprise Editions for Apple's iPhone and iPad. It simplifies the access and interaction with customer data while on the go and allows users to log calls made on the mobile phone via the Mobile app. Any address can be clicked on to bring up the Google map location, and changes to system data are updated in real-time.



## 2. SAP Business ByDesign

The SAP Business ByDesign provides intuitive and comprehensive mobile CRM solution. From your mobile phone, you can navigate the entire ERP and CRM system, modify your views, check inventory availability at multiple locations and create new sales orders. At this moment, the access is limited to iPhone but in future SAP is planning to support Android, BlackBerry, and Windows Phone.



## 3. Box.net Mobile

Box allows every employee to securely work across teams, with customers, and with partners - on any device, anywhere. It lets you organize and view all of your content online in a file/folder structure. Any of these folders can be rapidly turned into a web page. Widgets can be created to share files on a web page or blog. It supports Windows, iPhone, iPad, BlackBerry and Android.




## 4. Salesforce Chatter

It is a cloud-based social enterprise collaboration application and platform. It leverages the social features popularized by consumer social networking sites like Facebook — such as profiles, status updates, and real-time feeds — with the goal of raising productivity. You can monitor group discussions and developments, access files, update records with the app. One can also use Salesforce Mobile SDK to create highly customized, collaborative mobile apps.



## 5. Microsoft Dynamics CRM

It is a customer relationship management software package developed by Microsoft. It provides social insights, business intelligence, and productivity with One Microsoft solutions. You can deploy it in the cloud, on-premise, or with a hybrid combination. It is part of theMicrosoft Dynamics family of business applications. Dynamics CRM is a server-client application, which, like Microsoft SharePoint, is primarily an IIS-based web application which also supports extensive web services interfaces. Clients access Dynamics CRM either by using a browser or by a thick client plug-in to Microsoft Outlook. Besides Internet Explorer, the Chrome and Firefox browsers are fully supported.



## 6. Resco MobileCRM

It is a mobile client for sales force and field service people that allows field workers to access Microsoft Dynamics CRM data from the iPhone. Instead of having to call the office, field reps can access the data themselves. You don't need to install any middleware or server components.



## 7. Oracle Mobile Sales Assistant and Oracle Mobile Sales Forecast

Oracle Mobile Sales Assistant and Oracle Mobile Sales Forecast connects sales users with their Oracle CRM on Demand applications. You can manage your key customer relationships data in real time from your handheld device and integrate with on-device calendar and contact applications.




## 8. CWR Mobile CRM

CWR Mobile CRM is a mobile client for field sales and service people using Microsoft Dynamics CRM. It works on Windows Phone, iPhone, iPad, BlackBerry and Android platforms.




## 9 Sybase Mobile Sales for SAP CRM

The Sybase Mobile Sales for SAP CRM application is designed to give sales teams fast, reliable access to SAP CRM data from any mobile device.




## 10. Zoho CRM Mobile Edition

It gives you the option to access and work with your online Zoho CRM data from your mobile devices. The Zoho CRM native app is available for the iPhone, iPad, and



Android phones. Additionally, you will be able to use the web app in other mobile devices. You can access data from CRM modules such as Leads, Accounts, Contacts, Potentials, Cases, Tasks, Events, etc. wherever you go. Also, you can work in the offline mode to add, modify, or delete records which will be saved locally and synchronized with your online account, when you connect to the network.

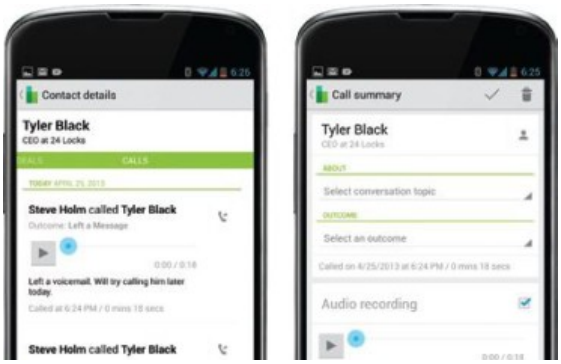
## 11. Elements CRM

A Mac Customer Relationship Management (Mac CRM) solution built by Interactive for Apple business using Apple devices. It is offered as a Cloud computing subscription-based service. Elements CRM is part desktop and part cloud. Its main functions include managing leads and contact information, tracking communication history, managing tasks, and follow-ups, tracking email communication, creating estimates and invoices and managing projects.



## 12. Base CRM

It is a customer relationship management (CRM) system that is available for iOS, Android, and Windows Phone.




Base was the first full native CRM Android app available. Unlike legacy cloud CRM and Salesforce Automation systems like Salesforce, Base leverages big data, mobility and real-time computing to help sales teams close more deals, while providing sales leaders with visibility into the sales pipeline and forecast. □

## HOW THEY COMPARE

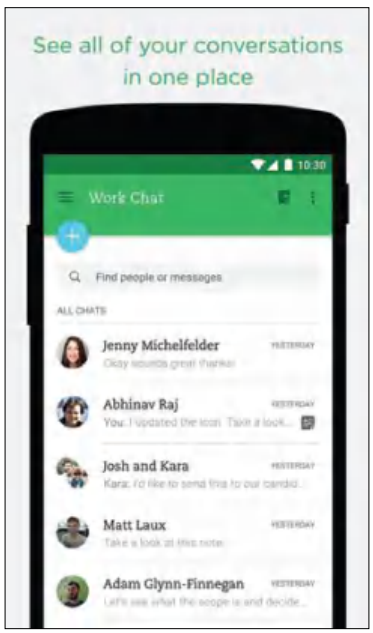
| System | Creator | Platform | Tax management | Lead Management | Time tracking | Workflow Management | Inventory Management | Offline Access | Free Trial Period | Price |
|---|---|---|---|---|---|---|---|---|---|---|
| **Base CRM** | Base CRM | Android, iOS,Windows | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 14 Days | $25 User/Month |
| **SugarCRM Mobile** | SugarCRM | Android, iOS | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 7 Days | $40 User/Month |
| **Elements CRM** | Elements CRM | iOS | ✔ | ✔ | ✔ | ✔ | ✔ | N/A | 30 Days | $18.95 User/Month |
| **Microsoft Dynamics CRM** | Microsoft | Android and iOS-✔/ Third Party,Windows | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 30 Days | $30 User/Month |
| **Oracle CRM** | Oracle Corporation | Android, iOS | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 30 Days | $75 User/Month |
| **Salesforce** | Marc Benioff | iOS | ✔ | ✔ | ✔ | ✔ | ✔ | ✘ | 30 Days | $65 User/Month |
| **SAP CRM** | SAP | Android, iOS | N/A | ✔ | N/A | ✔ | ✔ | ✔ | N/A | $89 User/Month |
| **Zoho CRM** | ZOHO Corporation | Android, iOS | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 15 Days | $11 User/Month |
| **Resco MobileCRM** | Resco s.r.o | Android, iOS,Windows | N/A | ✔ | ✔ | ✔ | ✔ | ✔ | 30 Days | $20 User/Month |
| **CWR Mobile CRM** | cwrmobility | Android, iOS,Windows | N/A | ✔ | ✔ | ✔ | ✔ | ✔ | 30 Days | $22 User/Month |
| **Sybase Mobile Sales for SAP CRM** | Sybase | Android, iOS | N/A | ✔ | ✔ | ✔ | ✔ | ✔ | 30 Days | N/A |
| **SAP Business ByDesign CRM** | SAP | Android, iOS | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | 14 Days | $24 Usewr/Month |

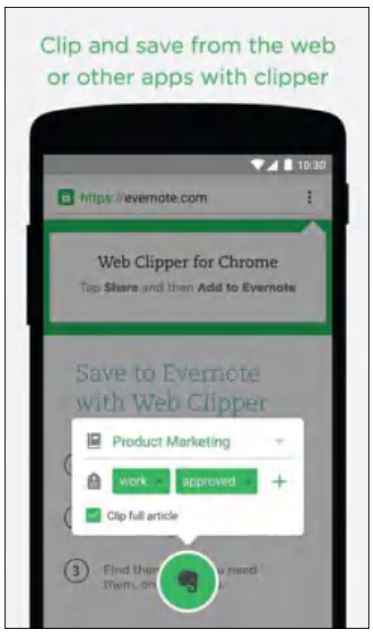
# 3 Popular Mobile Note Apps

A good substitute on mobile devices, these apps aid people who need to frequently take notes and relieves them from the task of pulling out their laptop each time they need to do so

- Swaraj Sourabh

## Evernote




Evernote is a workspace that syncs with all of your mobile devices. One can use it to write notes or for checklists and research. It can also organize web articles, docs, and photos according to user needs. A business owner or working teams can discuss their work with each other, and can find solutions easily without being physically present. Evernote is available in paid as well as free versions. It is free to download and use. Evernote Premium is paid and unlocks even more productivity.

**Key Features:**

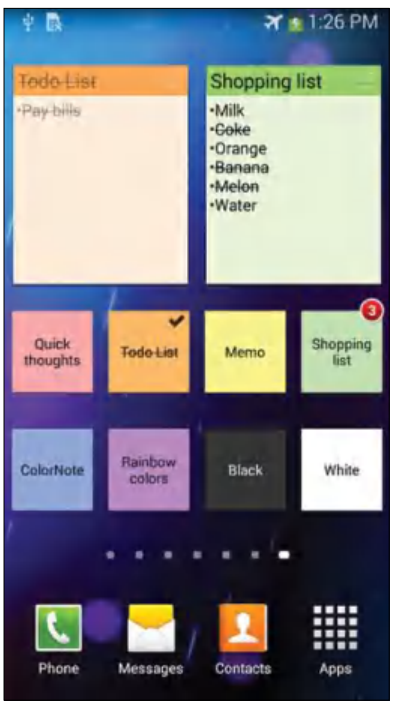
- Write in a workspace
- Make to-dos and checklists
- Keep Office docs, PDFs, and photos
- Searchable text in notes and photos
- Work chat helps to discuss notes
- Work together and share notebooks for team projects
- Make connections by turning biz cards into contacts
- Manage expenses by organizing receipts, bills & invoices
- Travel hassle free by saving research and reservations

**EVERNOTE PREMIUM Features:**

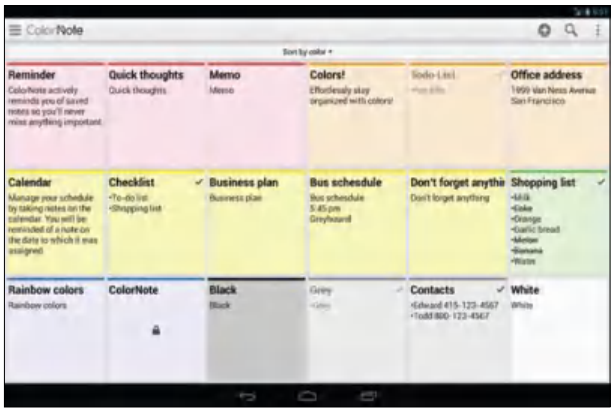
- Offline access to user
- 10 GB of new uploads each month
- Add a passcode lock on mobile
- Unlimited business card scans - scan biz cards, save to contacts, and connect on LinkedIn

**Compatible with:**
iOS, Chrome OS, Android, Microsoft Windows, Windows Phone, BlackBerry

## ColorNote




Social & Mobile Inc's ColorNote is a easy and simple app for notepad needs. It gives you a quick notepad editing experience when you write notes, memos, e-mails, messages, shopping lists and to-do lists. When you are done using the notepad, an automatic save command preserves your individual note. It features two basic note taking formats, a lined-paper styled text option, and a checklist option. Add as many as you want to your master list, which appears on the app's home screen each time the program opens. This list may be viewed in traditional ascending order, in grid format, or by note color. The text option lets you type as many characters as you want. After saving, you can edit, share, set a reminder, or check off or delete the note through your device's menu button. In the checklist mode, you can add as many items as you'd like and arrange their order with drag buttons activated in the edit mode.




**Key Features:**

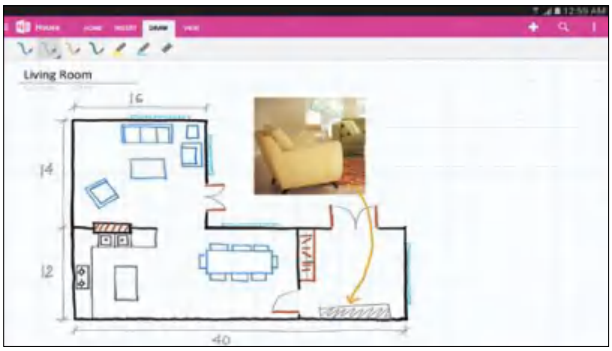
- Put your notes on your home screen
- Checklist notes for To do list & Shopping list
- Checklist notes to get things done
- Organize your schedule by note in calendar
- Write a diary and journal in calendar
- Protect your notes with passcode
- Secure backup notes to SD storage
- Supports online back up and sync; you can sync notes between phone and tablet
- Reminder notes on status bar
- Search notes
- Notepad supports ColorDict Add-on
- Powerful task reminder : Time Alarm, All day, Repetition
- Quick memo / notes
- Share notes via SMS, e-mail or Twitter
- Internet Access for online backup & sync notes
- Modify/delete SD card contents
- Prevent phone from sleeping, control vibrator, automatically start at boot: For reminder notes

**Compatible with:**
Android and Windows Phone

## OneNote

In Microsoft OneNote, users can enter typed text via keyboard, create tables, and insert pictures. However, unlike a word processor, users can write anywhere on a virtually unbounded document window by just clicking there. Also, users do not need to explicitly save their work – OneNote saves data automatically as the user works.






OneNote saves information in pages organized into sections within notebooks. The interface provides an electronic version of a tabbed ring-binder, into which the user can directly make notes and gather material from other applications. OneNote notebooks collect, organize, and share possibly unpolished materials – as compared to word processors and wikis, which usually target publishing in some way.

OneNote is a notebook for to-do lists and meeting notes, vacation plans, or anything you want to organize or remember. You can type, record audio or snap a picture and OneNote saves it. Your notes sync across your devices so you can access them wherever you go. And you can easily share your notes with others. OneNote has free apps for PC, Mac, Windows Phone, iPhone, iPad, Apple Watch, Android and Android Wear devices. And you can browse to onenote.com to get to your notes.

**Key Features:**

- Create and update notes and checklists
- Plethora of format notes like you do on a computer
- Organize your notes using notebooks, sections and tags
- Your notebooks sync across your computers and devices
- Search your notes and files
- Home screen widgets let you create picture, audio and text notes without opening the app.
- Enter voice notes on your Android Wear watch.
- Easily access your recent notes on your watch.
- Access your work notes stored on SharePoint online sites from your tablet or phone.

**Requirements:**

- Requires Android OS 4.1 or later.
- A free Microsoft account is required to use OneNote.
- OneNote opens existing notebooks created in Microsoft OneNote 2010 format or later.
- To sync your notes to OneDrive for Business, sign in with your organization's Office 365 or SharePoint account.

**Compatible with:**
Windows, Mac, iPad, iPhone, and Android ☐

# How MADP is Changing The Mobile App Development Industry

The mobile app development platform (MADP) route for app development is fast gaining popularity since only this approach allows an enterprise to fully leverage on the advantages of better productivity while factoring in operating system and device nu

- S.Sundararajan, Director, i-exceed Technology Solutions

The introduction of the Apple App Store in 2008 triggered the rise in significance of mobile apps. While consumer apps initially stole the limelight, the interest around internal business apps have recently been on a steady rise. A recent report from Garner indicates that the application infrastructure and middleware (AIM) market was worth $428.6 billion in 2014, a growth of 5.7% from the previous year.

However, this growth has come with its own share of challenges. Multiple operating systems and form factors have contributed to delays in development and deployment of apps. While Apple's iOS seemed to have had an initial edge over Google's Android, the platform wars seem to have reached a stalemate. The mobile app development platform (MADP) route for app development is fast gaining popularity since only this approach allows an enterprise to fully leverage on the advantages of better productivity while factoring in operating system and device nuances of customers, partners, vendors, employees, and other business stake holders.

When enterprises take on the challenge of appifying themselves, the development of an app must not be conceptualized and developed in isolation. Enterprises must recognize that an app plays an important role in implementing a unified business strategy. Leveraged right, a mobile app can indeed work as a source of competitive differentiation that would enable enterprises leapfrog their competitors.



**S.Sundararajan**
Director, i-exceed
Technology Solutions

*"Using an MADP, enterprises can follow and enforce standardized policies, designs, and techniques, rather than implementing them in fragments."*

However, vesting the responsibility of developing mobile apps with IT teams has led to the undesirable effect of technology calling all the shots. Developers and designers must factor in user engagement and consistency in user experience across devices apart from just coding and deployment of apps. Apps should also be developed by taking the entire enterprise into account as a whole.

## How MADP accelerates mobile app development

A well thought-out technology decision must aim to reduce the number of tools and architectures to be used. Enterprises disregarding this could get trapped in a snarl of architectures and end up with high support costs, security loopholes, and worst of all, sub-standard apps. Getting past these hurdles brings us to just one solution; the adoption of an MADP. The platform is not just an environment that comprises software, tools, and best practices for secure mobile app development; it represents a new thinking in enterprise mobility.

Platform based app development mitigates wastage in development effort and investment. Using an MADP, enterprises can follow and enforce standardized policies, designs, and techniques, rather than implementing them in fragments. By aligning enterprise mobile app strategy with corporate strategy, branding, and positioning, an MADP paves the way for the appification of the enterprise.

Using an MADP, enterprises can also take benefit from internal sufficiency. IT teams can begin app development on the platform with very little training or reskilling, thereby reducing dependence on external vendors. Then, there's the vital issue of security. A good MADP incorporates robust security mechanisms at every layer of the app process to provide levels of data protection that meets the highest standards. Last but not least, the platform reduces the total time and cost of mobile app development. □

# 7 CDN Services to Speed up Your Website's Access

CDN is a mechanism where a network of multiple servers at different places caches all your website static content like images, CSS,Javascript and stores it on their own servers. When a user visits your site, then instead of loading such content from your hosting servers it loads it from the CDN servers which increase the performance and security of your website and also saves bandwidth

- Raj Kumar Maurya

## CloudFlare

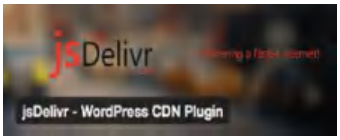
CloudFlare is the most popular free CDN service which you can use for your WordPress site to secure and speed up your site with ease. As CloudFlare blocks suspicious threats and limits access for potential abusers, it will also make your website more secure. To use their services you just need to create an account in their website and add your site. Once your site is added, you will get a custom name server for your site. Now just update your website's original nameservers with the provided ones. You can also use their free plugin with ease.

## Photon




Photon is a CDN service for those who have hosted their site on WordPress.com. However, if you have self-hosted WordPress sites then it is just a part of Jetpack plugin. Text and images are the two essential parts of any website, but images are the heavy components of web sites that take the maximum time to load. So, if you are using Photon then all your images will be served through WordPress.com, which reduce the loading time of your site to a huge extent. The good thing is that Jetpack is a free plugin and so is Photon service.

## jsDelivr




Every WordPress site uses JavaScript some or the other way and also the theme and plugin used in Wordpress are used in JavaScript. When you open your website, these JavaScripts have to be run which might decrease the speed of your site. So, jsDelivr free CDN service is a custom service to host JavaScripts of your site to speed up the loading process of your website. To activate this CDN service you just need to install a free plugin of jsDelivr.

## Swarm (Swarmify)

This service is relatively new compared to the others in the list, but it offers a free plan with 250 GB of free transfer. SwarmCDN is a relatively new peer-to-peer based content delivery network. They offer you pay as you go service which is really good for growing websites, and you get 30 days free trial for their paid package. Its features include hive caching, lazy loading, predictive loading and more. It is available in 196 countries worldwide.

## Incapsula

Incapsula CDN service is another well-known CDN service that offers both free and paid plans. It routes your entire website's traffic through their globally distributed network of high-end servers to give you spam protection service to protect your site from spam bots, access control, login protection etc for free. Use their WordPress plugin that will help you to get correct IP Address information for comments posted to your site. In a nutshell, it provides Global CDN, Website Security, DDoS Protection, Load Balancing & Failover protection.

## CoralCDN

CoralCDN is a project from the MIT which is a peer-to-peer based content delivery network and it is absolutely free of cost. P2P networks rely on the billions of computers connected across the Internet which is mainly why CoralCDN is free. The way Coral CDN works is by serving the static content through their servers by appending 'nyud.net' to the URL.'

## CDN.net




CDN.net offers you 1 TB free CDN bandwidth which is enough for a website with moderate traffic and images. CDN.net is a pay-as-you-go content delivery network that offers services worldwide. CDN.net makes your content secure and easy to access by providing users with DNS infrastructure, edge servers, DDoS protection, a mobile-ready control panel, and more. It hosts content in 113 cities in 43 countries to improve web performance for the regional, national, or international audience.

# 10 Tips to Speed Up Your Wordpress Website Load Time

When people visit your site for the first time, you have only a few seconds to capture their attention, but if your site takes too long to load, they'll move onto some other site. are gone before reading your articles

- Raj Kumar Maurya

You can't impress people with the great content you have on your website if it takes ages to load. Here are a few tips to ensure that people don't turn away from your site for this reason at least!

### 1. Framework/theme

The theme you have installed in WordPress affects the speed of your site. Twenty Fifteen "framework" which is the default WP theme is very lightweight and quite speedy. However, bloated frameworks, which have tons of features that you will never use, not only slow your site but also produce a crawling error, so choose your theme with care.

### 2. Caching Plugins

Plugins provide most useful add-on features to your WordPress. In the category of Wordpress plugins, there is a category of cache plugins which drastically improve page loading time and the best thing is they are free and easy to use. I would recommend W3 Total Cache, as it has all the features you'll need and is easy to install and use.




### 3. Optimize your database

You can simply use the WP-Optimize plugin or WP-DB Manager plugin, which will simply optimize your database that contains spam, post, revisions, drafts, tables, etc to reduce their overhead. You can also schedule dates for database optimization in these plugins.



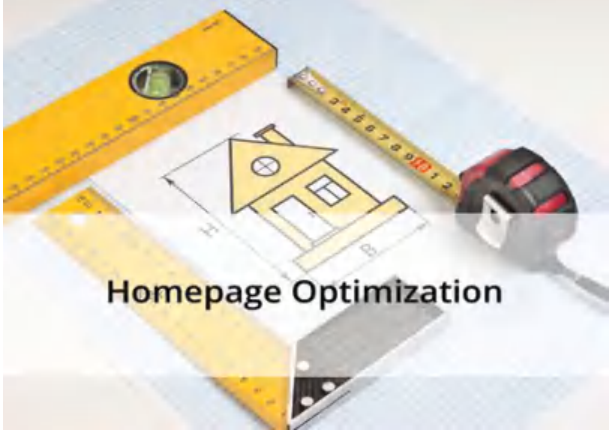
### 4. CDN (Content delivery network)




CDN is a group of multiple servers on different locations that takes all your static files (CSS, Javascript and images etc) and lets visitors visit your site by loading them in the browser as fast as possible by serving the files on servers as close to them as possible. You can use the CloudFlare type of free CDN to increase the performance.

### 5. Optimize your homepage to load quickly

The first page of your site or your homepage is the load quickly. Show excerpts instead of full posts; no. of posts on



home page should be between 5-7. Remove unnecessary widgets, inactive plugins and widgets that you don't need. Your homepage should be clean and focused.

### 6. Optimize images automatically




The images on your site are one the most time taking and heavy to load. Especially, if you have some photo intensive website. Try to use the images which are small in size. Fortunately, there is a free plugin called WP-SmushIt which will automatically reduce the size of your images without reducing the quality of the images.

### 7. Install the Lazy Load plugin.




The Lazy Load plugin offers a smart solution to image rendering and management. In essence, it only loads images when they are visible to the user to decrease server bandwidth.

### 8. Check for viruses or exploits in your website.

Malicious scripts are known to slow down the site loading speed. Theses scripts can be downloaded in your website when you use any un-official source of plugins and themes. Get rid of them with the Anti-Malware plugin in order to eliminate threats to your server.



### 9. Remove post drafts and revisions.

Please delete unwanted old draft posts as soon as possible using Bulk Delete, a plugin that enables you to delete post batches by status or user.

### 10. Delete and stop spam comments.

If you see your WordPress comment section, you would notice spam comments. Please clear them because they are slowing down your site's loading capabilities. Delete your comments manually in WordPress, and defend against spam by using Anti-Spam plugin.




# Installing NTOPNG — A Web-Based Network Traffic Analysis Tool

If you are looking to monitor different network protocols on your servers then you can go for the free tool that is both easy to install and use

- Raj Kumar Maurya

You can use this tool to monitor various protocols, traffic variants, and bandwidth across multiple time frames. It is based on libpcap and it has been written in a portable way in order to virtually run on every Unix platform, MacOSX and on Win32 as well.

Here is the step by step installation guide for Ntopng for Ubuntu 14.04 server.

**STEP 1.** First of all add Ntopng repo in your Ubuntu repo list. Create ntop.list file by running the command:

```
sudo nano/etc/apt/sources.list.d/ntop.list
```

Then add this line:

```
deb http://www.nmon.net/apt-stable/12.04/ x64/
deb http://www.nmon.net/apt-stable/12.04/ all/
```

**STEP 2:** Run the given command to add the key and then run update:

```
wget -qO - http://www.nmon.net/apt-stable/ntop.key |
sudo apt-key add -
sudo apt-get update
```

**STEP 3:** Now install Ntopng and its dependencies.

```
sudo apt-get install libpcap-dev libglib2.0-dev libgeoip-
dev redis-server libxml2-dev libnl1
sudo apt-get install ntopng pfring nprobe ntopng-data
n2disk nbox
```

**STEP 4:** Ntopng is installed and now it's time to create ntopng configuration file.

```
sudo nano /etc/ntopng/ntopng.conf
```

After running the above command copy all these lines into ntopng configuration file.

```
# /etc/ntopng/ntopng.conf
#
# The configuration file is similar to the command line,
with the exception that an equal
# sign '=' must be used between key and value. Example:
-i=p1p2 or --interface=p1p2 For
# options with no value (e.g. -v) the equal is also
necessary. Example: "-v=" must be used.
#
#
# -G|--pid-path
# Specifies the path where the PID (process ID) is saved.
#
-G=/var/tmp/ntopng.pid
#
# -e|--daemon
# This parameter causes ntop to become a daemon, i.e. a
task which runs in the background
# without connection to a specific terminal. To use ntop
other than as a casual monitoring
# tool, you probably will want to use this option.
#
-e=
#
# -i|--interface
# Specifies the network interface or collector endpoint to
be used by ntopng for network
# monitoring. On Unix you can specify both the interface
name (e.g. lo) or the numeric
# interface id as shown by ntopng -h. On Windows you
must use the interface number instead.
# Note that you can specify -i multiple times in order to
instruct ntopng to create multi-
# ple interfaces.
#
-i=1
#
# -w|--http-port
# Sets the HTTP port of the embedded web server.
#
-w=3000
#
# -m|--local-networks
# ntopng determines the ip addresses and netmasks for
each active interface. Any traffic on
# those networks is considered local. This parameter
allows the user to define additional
# networks and subnetworks whose traffic is also
considered local in ntopng reports. All
# other hosts are considered remote. If not specified the
default is set to 192.168.1.0/24.
#
# Commas separate multiple network values. Both
netmask and CIDR notation may be used,
# even mixed together, for instance "131.114.21.0/24,10
.0.0.0/255.0.0.0".
#
-m=192.168.1.0/24
#
# -n|--dns-mode
```

```
# Sets the DNS address resolution mode: 0 - Decode DNS responses and resolve only local
# (-m) numeric IPs 1 - Decode DNS responses and resolve all numeric IPs 2 - Decode DNS
# responses and don't resolve numeric IPs 3 - Don't decode DNS responses and don't resolve
#
-n=1
#
# -S|--sticky-hosts
# ntopng periodically purges idle hosts. With this option you can modify this behaviour by
# telling ntopng not to purge the hosts specified by -S. This parameter requires an argu-
# ment that can be "all" (Keep all hosts in memory), "local" (Keep only local hosts),
# "remote" (Keep only remote hosts), "none" (Flush hosts when idle).
#
-S=
#
# -d|--data-dir
# Specifies the data directory (it must be writable). Default directory is ./data
#
-d=/var/tmp/ntopng
#
# -q|--disable-autologout
# Disable web interface logout for inactivity.
#
-q=
```

**STEP5:** You can also download ntopng from their website and install it manually by using the following command if you don't want to add its repo.

```
$ tar xzf ntopng-1.0.tar.gz -C ~
$ cd ~/ntopng-1.0/
$ ./configure
$ make geoip
$ make
```

**STEP 6:** We also need to create ntopng.start file by using the command:

```
sudo nano /etc/ntopng/ntopng.start
```

Once you created ntopng.start file then add the following lines

```
--local-networks "192.168.0.0/24"
## give your local IP Ranges here.
--interface 1
```

**STEP 7:** To see all available interfaces and options, use the ntopng -h option:

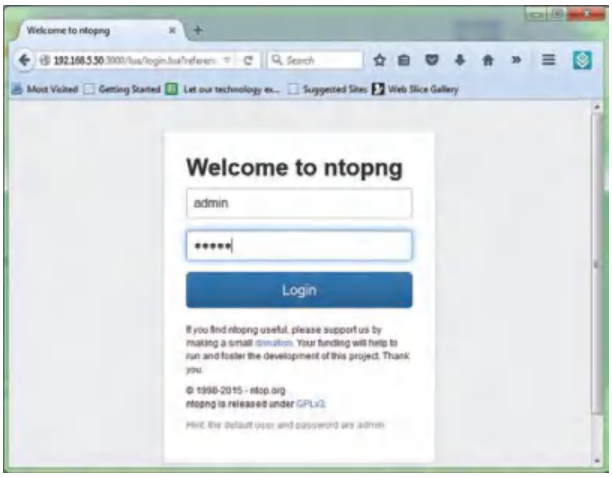
```
sudo ntopng-h
```

**STEP 8.** Start Ntopng and redis server daemon.

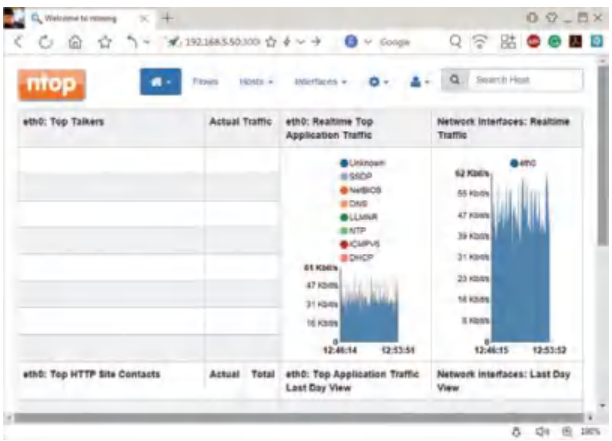
```
sudo service redis-server start
sudo service ntopng start
```

**STEP 9.** Now you can test your ntopng application by typing http://yourserver.name:3000. You will see ntopng login page.

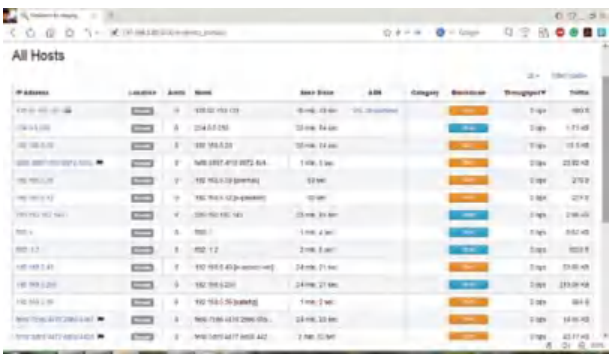
**STEP 10:** For the first time, your deafult credentials are user 'admin' and password 'admin'. Once you login, you will see the dashboard with a glance of real traffic on your network.




**STEP 11:** Click on the *Host* option to see the traffic and details of all the active hosts on your network.




**STEP 12:** You also get the graphical representation of traffic flow, hosts, ports, and applications and can monitor your network bandwidth consumption in a graphical way.



# Essential Tips and Tools to Secure Wordpress Sites

The most popular blogging and content management platform is also a favorite among hackers thanks to its popularity. Here's some advice and useful plug-ins to keep your Wordpress site safe

- Raj Kumar Maurya

Wordpress developers push regular updates to patch all the known vulnerabilities. But still it is not secure enough, and there are many other ways of hacking the websites based on Wordpress. Plugins add extra layer of security to your WordPress site and here we discuss the best ways to secure your site and the key plugins available.

### 1. Use a unique username and password

Choose a Unique username and password for your WordPress wp-admin and avoid default admin username. If you have already set your username to admin then there are some plugins such as **Username Changer** to change your username to something more secure.

### 2. Protect and secure login page

First of all change the default link to login to your Wordpress i.e yourdomain.com/wp-admin, which is known to everyone. You can change it manually, if you are developer or have good WordPress knowledge, but there are some plugins which can do the same with a few clicks, such as All-in-one security plugin in which you can change your login WordPress URL easily. To get a more secure login you can use Two-factor authentication (known as 2FA, or sometimes 2-step verification). This requires a user to login with not just his username and password, but also a unique code that's generated for one-time-use and sent to a device (typically a smartphone) via SMS or an iOS/Android app. **Clef** type of plugins enable this authentication easily on your Wordpress site.

### 3. Choose your theme and plugins wisely

When you choose theme or plugins to use in your in your website, please choose the ones that are actively maintained and regularly updated. Some people use cracked versions of paid themes and plugins but they don't know that these plugins and themes may have some malicious code from the hackers who hacked the paid themes.

### 4. Protect your database and limit the use of plugins

Backup your WordPress database regularly after some interval of time which helps you to keep your all posts with you. In case someone hacked your website you still have its copy. Your website might be at stake if you are using the predictable wp_ prefixes in your database. If you are not an IT person or developer and want to change your database's wp_prefixes, then don't do it manually. Also limit the use of plugins in your website. More plugins mean less security as every plugin is not updated on a regular basis.

### 5. Limit Login attempts

There is a nifty little WordPress plugin called Limit Login Attempts that enables you to limit the number of failed login attempts and even ban an IP for a specified number of hours. The hacker would need to have many different proxies because the plugin would keep banning that IP address after a certain number of failed login attempts.

### 6. Secure it from Brute Force and DDoS Attacks

A brute-force attack is performed to gain access to someone else's account on the site whereas DDoS attack is usually launched to take a site down (typically by consuming resources). There are many plugins available to stop Brute Force. Out of those BruteProtect is a cloud-powered Brute-Force attack prevention plugin and aims to provide the best protection against botnet attacks. It automatically blocks an IP address if it finds some malicious activity such as the number of failed login attempts. CloudFlare is the way to protect your site from DDoS attacks. It protects and accelerates any website online. After submitting your website in CloudFlare, its web traffic is routed through their intelligent global network. They automatically optimize the delivery of your web pages so your visitors get the fastest page load times and best performance. **CloudFlare** offers both free and premium plans. Free plan is enough to get a decent amount of brute force protection.

Here's a list of security plugins to secure your website:

### 1. WordFence

It scans all the files of your Wordpress core, theme and plugin. It it finds any infection, it will notify you. For making your website faster, it uses Falcom caching engine. This plugin is free, but a few advanced



features are available for premium users. This plugin blocks brute force attack and can add two-factor authentication via SMS. You can also block traffic from a specific country. It also includes a firewall to block fake traffic, botnet and scanners. It also scans your hosting for known backdoors including C99, R57 and others. If it finds anything, you will instantly get email notification.

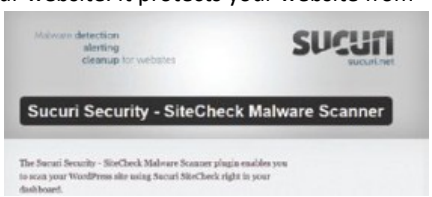
## 2. BulletProof Security




BulletProof Security is another popular WordPress security plugin. It adds firewall security, database security, login security and more. It limits failed login attempts and blocks security scanners, fake traffic, IP blocking and code scanners. It keeps on checking the code of WordPress core files, themes and plugins. It comes with built-in file manager for htaccess. It protects WordPress websites against various vulnerabilities including XSS, RFI, CRLF, CSRF, Base64, Code Injection, SQL Injection and many others.

## 3. Sucuri Security

This plugin offers various security features like security activity auditing, file integrity monitoring, malware scanning, blacklist monitoring, and website firewall. It incorporates various blacklist engines including Google Safe Browsing, Sucuri Labs, Norton, McAfee Site Advisor and more to check your website. It protects your website from DOS attack, Zero Day Disclosure Patches, brute force attacks and other scanner attacks.




## 4. iThemes Security (formerly Better WP Security)

It tracks registered users' activity and adds two-factor authentication, import/export settings, password expiration, malware scanning, and various other things. It scans the entire website and tries to find if there is any potential vulnerability in your website. It also prevents brute force attacks and bans the IP addresses which try to use brute force. It also integrates Google reCAPTCHA to prevent comment spam on your website.




## 5. Acunetix WP SecurityScan

It offers a security scanning tool to find vulnerabilities in web applications. It offers file permission security, version hiding, admin protection, removing WP generator tag from source, and database security. It also offers a database backup tool to take a backup of your website and live traffic monitor tool to check website traffic in real time.



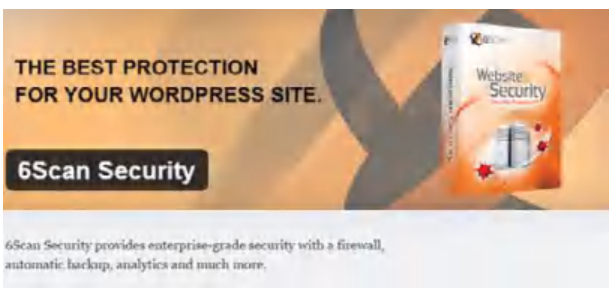

## 6. All In One WP Security & Firewall

This is one of the popular security plugins. It protects against brute force login attack and also allows you to schedule automatic backup and receive email notification. It also protects PHP code by disabling admin area editing. It adds a web application firewall in your website and enables 5G Blacklist to prevent various attacks. It denies bad query strings, prevent XSS, CSRF, SQL injection, malicious bots and other security threats.




## 7. 6Scan Security

6Scan Security has a security scanner which scans and protects your website against SQL injection, Cross Site Scripting, CSRF, Directory traversal, Remote file including, DOS attack and other OWASP top ten security vulnerabilities. It also has an automatic malware fix for malware related issues on your website.



# 50+ Free and Essential Business Tools for an SME

Enterprise mobility software, ERP and CRM tools, productivity software, document management tools, content management systems, ecommerce platforms, network monitoring tools, and lots more…

- Sonam Yadav

# 13 PRODUCTIVITY TOOLS

**1. Apache OpenOffice:** It is a Free alternative for Office productivity tools. It is an open-source office productivity software suite containing word processor, spreadsheet, presentation, graphics, formula editor, and database management applications.

**2. S2 Recovery:** This software provides buttons for recovering and opening corrupt Microsoft Word old format doc and the new format docx documents

**3. SAP Business One Development Environment:** SAP Business One provides several APIs for building solutions. The SAP Business One Development Environment (B1DE) is a tool that makes it even easier to use APIs and speeds up the development and packaging of add-ons based on these interfaces

**4.Talend Open Studio:** Talend Open Studio provides tools to collaborate on and standardize enterprise-wide data based on an open and dynamic data model, and built on a single platform along with Talend's leading integration and data quality capabilities.

**5.OpenKM Document Management - DMS:** OpenKM is a powerful and scalable multiplatform application for document management, based on open technology (Java, Tomcat, GWT, Hibernate, Spring and JBPM). It is a Web 2.0 application that works with Internet Explorer, Firefox, Safari and Opera.

**6.CMIS Input plugin for Pentaho:** Imagine being able to extract from your Enterprise Content Management System, all the metadata of your documents using simple queries with a query language very close to the traditional SQL.

**7.ONLY OFFICE:** ONLY OFFICE is a business service that resolves collaboration issues for both small and medium-sized teams. The platform allows for optimization of your business processes from lead generation to order fulfillment.

**8. Collabtive:** Collabtive is web based project management software. It is an Open Source alternative for proprietary tools like Active Collab or Basecamp.

**9.BIRT iHub F-Type:** Open Source BIRT is a visual-based development tool used to create data visualizations and reports that can be embedded into rich client and web applications. BIRT is a top-level designer tool within the Eclipse Foundation, an independent not-for-profit open source community and consortium of software vendors.

**10. Agilefant:** The scalable open source tool for lean and agile project management. It is the most versatile open source solution of its kind today, with a rapidly growing user base of more than 10k users around the world in thousands of organizations.

**11. PHPlot:** PHPlot is a PHP graphics class for creating charts and plots. It works with PHP5 and the PHP GD extension to produce PNG, GIF, or JPEG images. TrueType fonts (TTF) are optional, or built-in GD fonts can be used.

**12. Mallmold Ecommerce System:** Mallmold ecommerce system is an open source php mall system, powerful and high performance, is the ideal choice for SMEs shop system and maximize savings for the enterprise.

**13.LibreOffice:** A powerful open source productivity suite: LibreOffice boasts the same six applications as Apache OpenOffice-Writer, Calc, Impress, Draw, Base and Math-but the two suites differ in terms of applications features, usability and community support.

# 8 Network Monitoring Tools

**1. Nagios:** Nagios is a powerful, enterprise-class host, service, application, and network monitoring program. Nagios runs on NIX hosts and can monitor Windows, Linux/Unix/BSD, Netware, and network devices.

**2. GroundWork Monitor:** A unified Monitoring for all your devices and applications - virtual or physical. Provides event handling, notifications, dashboards, and much more.

**3. Ganglia:** Ganglia is a scalable distributed monitoring system for high-performance computing systems such as clusters and Grids. It is based on a hierarchical design targeted at federations of clusters.

**4. Angry IP Scanner:** Angry IP scanner is fast and friendly network scanner for Windows, Linux, and Mac. It is very extensible, allowing it to be used for very wide range of purposes, with the primary goal of being useful to network administrators.

**5. NetworkMiner packet analyzer:** NetworkMiner is a Network Forensic Analysis Tool (NFAT) for Windows that can detect the OS, hostname and open ports of network hosts through packet sniffing or by parsing a PCAP file.

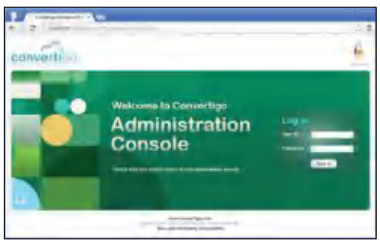
**6. Pandora FMS: Flexible Monitoring System:** Pandora FMS is a performance & availability monitoring system, ready for big environments. It uses agents for local monitoring and can do several kinds of remote network monitoring (SNMP v3, TCP checks, remote WMI probes...)

**7. NSClient++:** NSClient++ is a windows service that allows performance metrics to be gathered by Nagios .It is an attempt to create a NSClient and NRPE compatible but yet extendable performance service for windows.

**8. jNetMap:** jNetMap is a graphical network monitoring and documentation tool. It will ping all registered devices every x minutes, updating the status according to the result of the ping.

# 5 Mobility Management Solutions

**1. Convertigo:**

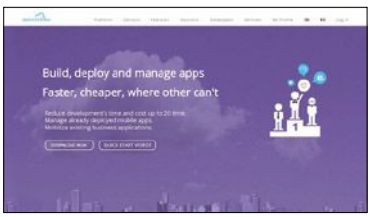



Convertigo is a full-featured enterprise mobility tool for developing, deploying and managing apps. In addition to the free community edition (which has been installed more than 50,000 times), it comes in paid standard and extended editions.

**2. OCS Inventory NG:** Many IT departments use OCS Inventory NG to track their on-site hardware, and now the tool offers agents for Android and Windows mobile devices as well. It detects active devices on the network and provides information about the type of device and installed apps.




**3. OpenMobster:** This tool includes both a mobile backend as a service that can be deployed in private clouds and a mobile enterprise application program (MEAP). Features include an enterprise sync platform, push notifications, mobile remote procedure caller (RPC) and a management console.




**4. WSO2 Enterprise Mobility Manager:** This comprehensive enterprise mobility solution includes MDM, mobile app management, enterprise app store and mobile data security features. Paid support and training are available.



**5. MasterPassword:** Instead of saving your passwords in a vault, MasterPassword generates secure passwords on demad using an algorithm based on your name, the site and your master password.



## 9 Firewalls

**1. Endian Firewall Community:** Endian Firewall Community is a "turn-key" linux security distribution that makes your system a full featured security appliance with Unified Threat Management functionalities. The software has been designed for the best usability.

**2. Advanced Onion Router:** Some of the improvements include UNICODE paths, support for HTTP and HTTPS proxy protocols on the same Socks4/Socks5 port with HTTP header filtering that generates fake identity-dependent headers every time the identity is changed .

**3. Privoxy:** Privoxy is a non-caching web proxy with advanced filtering capabilities for enhancing privacy, modifying web page data and HTTP headers, controlling access, and removing ads and other obnoxious Internet junk.

**4. UPnP PortMapper:** The UPnP PortMapper can be used to easily manage the port mappings port forwarding of a UPnP enabled internet gateway router in the local network.

**5. OPNsense:** OPNsense is an open source, easy to use and easy to build FreeBSD based firewall and routing platform. OPNsense includes most of the features available in expensive commercial firewalls, and more in many cases.

**6. 3proxy tiny free proxy server:** Universal freeware proxy server with HTTP, HTTPS, SOCKS v4, SOCKS v4a, SOCKS v5, FTP, POP3, UDP and TCP portmapping, access control, bandwith control, traffic limitation and accounting based on username, client IP, target IP, day time, day of week, etc.

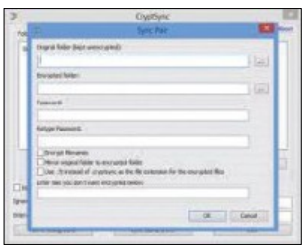
**7. ProxyDNSFilters:** ProxyDNSFilters are two tools that can be useful for web filtering: a custom filtered DNS relay server and a custom filtered Proxy server. Basic SOCKS v4 & v5 is also supported.

**8. Jateway:** Jateway is a general purpose TCP/IP connection proxy. Jateway accepts connections on arbitrary ports and specific host combinations.

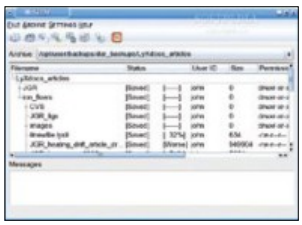
**9. WebCastellum:** WebCastellum is a Java based web application firewall which can protect application against cross site scripting, SQL injections, command injections, parameter manipulation, and it can be integrated easily to a java based application.

## 7 Encryption Tools

**1.cryptsync:** Synchronizes multiple folders with each other, keeping them up-to-date. One folder of each pair is kept encrypted. Very useful when using cloud storage tools like SkyDrive, GDrive or Dropbox.



**2. DAR - Disk ARchive:** DAR is a command-line backup and archiving tool that uses selective compression strong encryption, may split an archive in different files of given size and provides on-fly hashing. DAR knows how to perform full, differential, incremental and decremental backups.



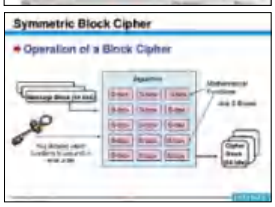
**3. ZipSnapNG:** ZipSnapNG is a portable multi-platform backup tool which, despite its simplicity, provides advanced features such as incremental backup, data deduplication, encryption and configurable retention.



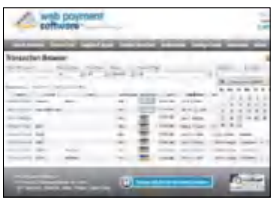
**4.Jackcess Encrypt:** Implementation of the encryption service from the Jackcess project



**5. Cipherbox:** Cipherbox is a free software to protect many kinds of documents (Office/PDF/ZIP) with passwords by using native and standard encryption algorithms. It can also compress the selected documents into an archive with a lock.




**6. JCRYPT Java Web Service Client:** The JCRYPT client make it easy and convenience to consume JCRYPT Web Service which enables encryption/decryption of your data with intuitive command line tool or Java API both packed as single very small jar file.



**7. SimpleEncryptionTool:** This is a Application written in QT on top op the QT Simple Encryption module.It can Encrypt Text, and Data.



# 5 Data Backup Tools

**1. 7-Zip:** 7-Zip is a file archiver with a high compression ratio. You can use 7-Zip on any computer, including a computer in a commercial organization.

**2. PeaZip:** PeaZip is a free archiver tool. The application provides an unified, natively portable, cross-platform file manager and archive manager GUI for many Open Source technologies like 7-Zip, FreeArc, PAQ, UPX.

**3. FOG - A Free Cloning Solution:** FOG is a free open-source cloning/imaging solution/rescue suite. FOG can be used to be image Windows XP, Vista, Windows 7 and Window 8 PCs using PXE, PartClone, and a Web GUI to tie it together.

**4.DriverBackup!:** Fast and user-friendly free tool for drivers's backup, restoration and removal with command line options, automatic restoration from CD\DVD and path formatting. DriverBackup! includes also an interactive command line builder.

**5.EVACopy:** EVACopy is a backup program that has versioning and easy restoration in mind. It's light-weight, portable (no setup required, no dependencies, no repository, no database), easily deployed to multiple workstations, simple to use.

# 5 Free Full Games



**1. Open Karts**
An excellent driving discipline and a true racing simulation the driver has to drive fast but also to correctly set his kart up to buy new mechanical parts, to repair them and to please his sponsors.



**2. Shadow Kings**
In a fantasy kingdom, men, elves and dwarves have lived peacefully together for generations. But their carefree way of life has long been a source of envy among the creatures of darkness.




**3. Police Supercars Racing**
Sun City is the city of the future, but the rising crime rate makes this place dangerous for living. Extremists block roads, criminals crash cars and hackers override the city's automatic traffic control.



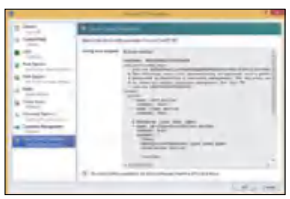
**4. Barn Yarn**
Hold sales of old things found around the house and purchase everything you might need to turn the ramshackle barn into a cozy and warm winter home for the farm animals.



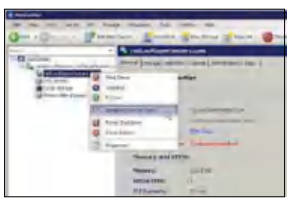
**5. The Time Machine**
Travel in various times, in extraordinary places, to find all the pieces of the Time Machine and to restore the order in the space-time! It has 20 screens to visit With a Linear navigation.

## Linux Corner

**CoreOS: A Linux distribution designed for easy creation of OS instances in virtual containers.**



**Xen server: A server virtualization and hypervisor management software that lowers the total cost of ownership for desktop, cloud and server virtualization infrastructures.**



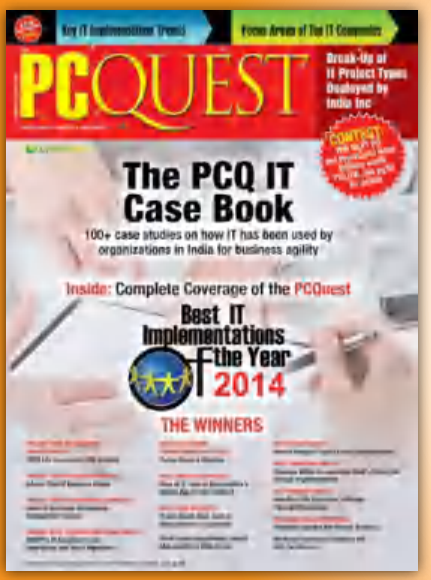
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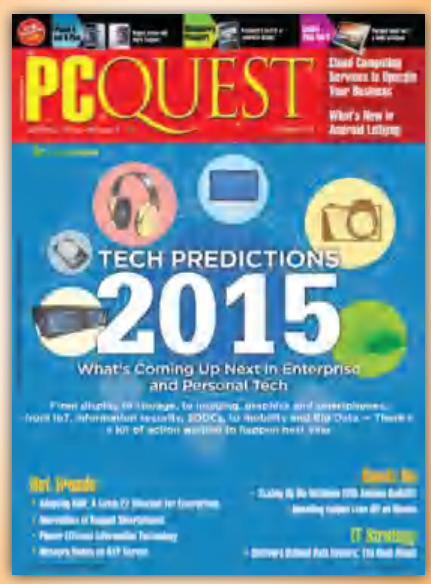
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**6.CMIS Input plugin for Pentaho:** Imagine being able to extract from your Enterprise Content Management System, all the metadata of your documents using simple queries with a query language very close to the traditional SQL

**7. ONLY OFFICE:** ONLY OFFICE is a business service that resolves collaboration issues for both small medium-sized teams.The platform allows for optimization of your business processes from lead generation to order fulfillment.

**8. Collabtive:** Collabtive is web based project management software. It is an Open Source alternative for proprietary tools like Active Collab or Basecamp.

**9. BIRT iHub F-Type:** Open Source BIRT is a visual-based development tool used to create data visualizations and reports that can be embedded into rich client and web applications. BIRT is a top-level designer tool within the Eclipse Foundation, an independent not-for-profit open source community and consortium of software vendors.

**10. Agilefant:** The scalable open source tool for lean and agile project management. It is the most versatile open source solution of its kind today, with a rapidly growing user base of more than 10k users around the world in thousands of organizations.

**11. PHPlot:** PHPlot is a PHP graphics class for creating charts and plots. It works with PHP5 and the PHP GD extension to produce PNG, GIF, or JPEG images. TrueType fonts (TTF) are optional, or built-in GD fonts can be used.

**12.Mallmold Ecommerce System:** Mallmold ecommerce system is an open source php mall system, powerful and high performance, is the ideal choice for SMEs shop system and maximize savings for the enterprise.

**13. LibreOffice: A powerful open source productivity suite:** LibreOffice boasts the same six applications as Apache OpenOffice-Writer, Calc, Impress, Draw, Base and Math-but the two suites differ in terms of applications features, usability and community support. Specifically, LibreOffice is often considered to be more actively developed than OpenOffice.




# 5 FREE FULL GAMES

**1. OPEN KARTS:** An excellent driving discipline and a true racing simulation the driver has to drive fast but also to correctly set his kart up to buy new mechanical parts, to repair them and to please his sponsors.

**2. SHADOW KINGS:** In a fantasy kingdom, men, elves and dwarves have lived peacefully together for generations. But their carefree way of life has long been a source of envy among the creatures of darkness.

**3. POLICE SUPERCARS RACING:** Sun City is the city of the future, but the rising crime rate makes this place dangerous for living. Extremists block roads, criminals crash cars and hackers override the city's automatic traffic control.

**4. BARN YARN:** Hold sales of old things found around the house and purchase everything you might need to turn the ramshackle barn into a cozy and warm winter home for the farm animals.

**5. THE TIME MACHINE:** Travel in various times, in extraordinary places, to find all the pieces of the Time Machine and to restore the order in the space-time! It has 20 screens to visit With a Linear navigation.

## 9 Firewalls

1. Endian Firewall Community
2. Advanced Onion Router
3. Privoxy, 4. UPnP PortMapper
5. OPNsense, 6. 3proxy tiny free proxy server, 7. ProxyDNSFilters
8. Jateway, 9. WebCastellum

## 7 Encryption Tools

1. cryptsync, 2. DAR - Disk ARchive, 3. ZipSnapNG
4.Jackcess Encrypt, 5. Cipherbox
6. JCRYPT Java Web Service Client, 7. Simple Encryption Tool

## 5 Data Backup Tools

1. 7-Zip, 2. PeaZip
3. FOG - A Free Cloning Solution
4. DriverBackup!
5. EVACopy

## 8 Network Monitoring Tools

1. Nagios, 2. GroundWork Monitor, 3. Ganglia, 4. Angry IP Scanner, 5. NetworkMiner packet analyzer, 6. Pandora FMS: Flexible Monitoring System, 7. NSClient++ 8. jNetMap

## 5 Mobility Management Solutions

1. Convertigo, 2. OCS Inventory NG, 3. OpenMobster
4. WSO2 Enterprise Mobility Manager, 5. Master Password

## Linux Corner

**CoreOS:** A Linux distribution designed for easy creation of OS instances in virtual containers.
**Xen server:** A server virtualization and hypervisor management software that lowers the total cost of ownership for desktop, cloud and server virtualization infrastructures.

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To download a barcode app, SMS <f2k> to 56677
from a mobile phone with Internet access and camera.

ULTRABOOK

# ASUSPRO ADVANCED BU401LG

This ultra-slim and lightweight business ultrabook offers military-standard reliability and intelligent manageability to meet your daily productivity norms even under extreme conditions

— Anuj Sharma

At just 1.64kg and a 20mm profile, the ASUS BU401LG is slim and light enough to be carried around anywhere and under any condition. It is encased in a carbon fiber structure that gives the chassis extra strength making it more durable for business use. It is also MIL-STD 810G (military standard) certified, which offers additional tolerance to extreme conditions over regular notebooks. These include tolerance to double the drop height of standard laptops, twice as strong hinges, 20% higher endurance to pressure, and spill resistant keyboard.

The ultrabook comes pre-loaded with Intel's SBA security solutions and utilities to make your PC more manageable and secure. This includes six applications to help organize security and productivity: Software Monitor, Data Backup and Restore, USB Blocker, PC Health Center, Energy Saver, and Wireless Display. The Anti-Theft technology helps disable access to the operating system in the event that your notebook is ever lost or stolen. It also has a fingerprint scanner on board offering better control over the device and takes data access authorization and protection to a higher level with a personal touch. In terms of connectivity, the ASUS BU401LG features three USB 3.0, VGA, HDMI, audio port, 2-in-1 card reader, and Kingston lock.




**Price: ₹89,499**

## SCORE

PRICE: **8/10**
PERFORMANCE: **9/10**
FEATURES: **9/10**

**Overall: 9/10**

**Performance:** The ASUS BU401LG we reviewed came with an Intel Core i5-4210U processor, 4GB of memory, Intel HD Graphics 4400, and a 500GB SATA HDD. These components combined to give the ultrabook very good and power packed performance on most performance benchmarks, including PCMark7 (day-to-day operations), 3DMark11 (3D rendering performance).

The 14" screen has a larger than usual 1600x900 resolution, while most ultrabooks pack a 1366x768 resolution screen. This means that more columns and rows will show up on the spreadsheets you view. The anti-glare screen has a matte finish, which prevents reflections when viewed under direct sunlight. Videos and graphics look fine on the system.

The finger print scanner worked fine and was less affected by skin surface conditions, including dirty or oily skin and easily recognizes the finger print. The spill resistant chiclet keyboard with backlit keys provides better click ratios and maintains high precision while offering a bigger touch surface.

The ultrabook also impressed us with its battery life. It delivered 9 hours 40 minutes on our battery drain test. This means that you should be able to get most of a business day's work out of the system before you have to recharge again.

**Bottomline:** ASUS BU401LA ultrabook will appeal to mainstream users who need excellent performance to meet their day's business productivity requirement. It's got the power to do real work, from shredding through large spreadsheets to proofing webpages.

**KEY SPECS:** Intel Core i5-4210U Processor, 1.7 GHz (3M Cache, up to 2.7 GHz), Preload Windows 7 64 bit Professional (upgradable to Windows 8 64bit Professional), 4GB RAM, 500 GB HDD, Intel HD 4400 Graphics, Weight : 1.64Kg, 1x 3.5mm jack, 1x VGA Port, 1x HDMI

**PROS:** Ultra-light and ultra-slim with full I/O connectivity, anti-glare wide-view panels, spill-resistant keyboard, greater tolerance to drops, pressure, and wear and tear over regular notebooks.

**CONS:** At such a high-price, higher RAM (around 8GB) would have been appreciated

**WRITE TO: Asus India, Mumbai**
Ph: 022-61598612, Email: helpline_north@asus.com

SMARTPHONES

# 6 Best Smartphones Under ₹6,000

You get surprisingly good deals for this amount and there are actually many less popular brands with their offerings that do quite a decent job

Swaraj Sourabh

Indian smartphone market changes everyday and lots of smartphone manufacturers have come to India with their offerings. The competition among them has led to plummeting smartphone prices with the result you get some very decent deals within this price range, which was unthinkable even a year back. Previously the sweet spot for the consumer was 10k but now smartphones under 6k are trending. Moreover, gone are the days when affordable budget phones suffered due to poor camera and performance. We have some good phones under 6k which impress us on various factors. We first dwell on the key features that form part of this package:

1. **HD display:** In the age of touch screen devices, the first and foremost aspect to consider before buying a smartphone is the display. There are various smartphone under 6000, which features an HD screen but a thing to note is that the pixel per inch, which actually translates into the crispness of the content differs according to their size.
2. **1 GB RAM:** We would not have thought of a smartphone with 1 GB RAM in this budget a year back, however the competition has now made it possible. So if you are a power user, you can opt for a smartphone with 1 GB Ram.
3. **Octa-core processors and GPU units for gaming:** Gone are the days when budget smartphones were backed by low end first generation dual-core CPUs. Smartphones these days are equipped with Quad-core and even octa-core processors that can execute number of tasks without slowing down and moreover they have powerful GPU units to deliver decent gaming experience
4. **3G and 4G connectivity:** The chipsets empowering the smartphones these days are equipped with 3G and 4G antennas, which lets you consume Internet content at faster speeds.
5. **Decent cameras:** Smartphones in budget category also don't compromise on camera technology. Manufacturers integrate their products with sensors that can take some really good shots and can even shoot in HD quality. You can easily get a smartphone with 8 to 13 MP rear and 2 to 5 MP front camera sensors under 6k.
6. **Large Battery units:** All sub-6K smartphones these days have large battery units that can last a day or even longer with heavy usage. You can expect a battery unit of 2500 to 3000 mAh in smartphones for this price range.
7. **Latest Android version:** You can get updated version of Android at this price point.

## HERE ARE BRIEF REVIEWS OF THE 6 BEST SMARTPHONES UNDER RS. 6,000

### Moto E 2nd Generation (3G)

**Price: ₹5,999**



**KEY SPECS:**

- 4.5-inch quarter HD IPS 960 x 540 pixels resolution
- 5 MP primary camera and 0.3 MP front camera
- Android v5 Lollipop OS with 1.2 GHz Qualcomm Snapdragon 200 quad core processor
- 1 GB RAM, 8 GB internal memory, expandable up to 32 GB and dual SIM
- 2390mAH lithium-ion battery

Good form factor, easy to hold and operate with one hand, good battery life

Main camera is not great, front camera is potato

The Moto E was a fantastic phone when it first came out. It has a 2390 mAh battery and the screen also requires less power, so it goes 2 days on a single charge.



### Redmi 2

**Price: Rs. 5,999**

**KEY SPECS:**

- 4.7 " IPS LCD capacitive HD display (312 ppi)
- 1.2 GHz quad-core Qualcomm Snapdragon 410 CPU, 1 GB RAM
- 8 MP rear with LED flash & 2MP front camera, Android 4.4 with MIUI 6
- 8GB in-built storage, expandable up-to 32GB, 2200 mAh battery

One of the best camera at this price, sleek design, good battery back-up, smooth computing performance, 4G enabled

MIUI 6 lags occasionally, plastic built

Xiaomi has the credit to change the budget smartphone landscape and its latest device Redmi 2 is one solid contender. The smartphone has an amazing camera, decent screen and delivers good multitasking experience. Moreover, it offers 4Gconnectivity on both the SIM cards.

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from a mobile phone with Internet access and camera.

## Phicomm Energy 653 4G

**Price: ₹4,490**



**KEY SPECS:**

- 5-inch HD IPS capacitive touchscreen with 1280 x 720 pixels resolution
- 8MP primary camera with auto focus and 2 MP front facing camera
- Android v5.1 Lollipop operating system with 1.1GHz Qualcomm MSM8909 quad core processor
- 1GB RAM, 8GB internal memory expandable up to 64GB and dual SIM
- 300mAH lithium-ion battery

Good design, long battery life

Poor camera

The smartphone runs smoothly while operating and there was no lag in the performance even while playing games like real racing. The smartphone is among the few devices, which provides 4G support in both SIM card slots at this price.



## YU Yunique

**Price:- ₹4,999**

**KEYS SPECS:**

- 4.7-inch 720p HD display
- 1.2 GHz Quad-Core, 64-bit Qualcomm Snapdragon 410 processor
- 1 GB RAM, 8 GB internal storage (expandable to 32 GB)
- 8 MP rear camera 2 MP front camera
- Android 5.1 Lollipop, 2000 mAh battery.

Price, Design, Battery

Front camera, Internal memory

Yu Yunique at Rs 4,999 is a perfect device for a first time smart phone user as they can enjoy the goodness of Android ecosystem and 4G in one device.

## Micromax Canvas Xpress 2

**Price: ₹5,999**



**KEY SPECS:**

- 5.0-inch LCD display 294 ppi
- Octa-core 1.4 GHz Mediatek MT6592 processor, 1GB RAM,
- 8 GB storage (expandable up to 32GB)
- 13 MP rear camera and 2 MP front camera,
- Android Kitkat OS, Li-Ion 2500 mAh battery

dynamic design, good hardware and software performance

Camera hangs sometime

Micromax canvas xpress 2 has everything- good features,decent performance & a design of a premium phone,all this comes with a affordable pricing. This phone can be the first choice for the person who want to experience the feel of android device in affordable price.



## InFocus M370

**Price: ₹5,999**

**KEY SPECS:**

- 5-inch LCD (1280x720)
- Quad core 1.1 GHz & Qualcomm Snapdragon 210,1 GB RAM
- 8 GB internal storage, expandable upto 32 GB,Android lollipop 5.1.1
- Front camera 2 MP & Rear camera 8 MP, Dual SIM, 2230 mAh battery

Sleek design, Light weighted , 4G Ready

Slow processor, display could have been more brighter

InFocus M370 has amazed us with looks, design and build but performance suffers on many front .In this price bracket Micromax xpress 2 and Xiaomi Red me 2 prime have better performance capabilities.

SMARTPHONE

# LG G4 Stylus

A phone that has wide screen,featuring a stylus and good battery backup

- Swaraj Sourabh

**Price: ₹21,000**

It resembles the G4, the **big brother in LG smartphone family**. LG G4 Stylus is made from quality plastic back panel with matte finish and metal ring at the edges. It has volume controls and power buttons on its backside. The phone has a stylus pen that's drilled into the upper right corner of the phone. The matte finish gives you a good grip but it feels a bit bulky with 163g weight.

One of the **best features** of this phone is its great 5.7 inches IPS display, which has 258 ppi pixel density but it is sharp and shows true colours. The smartphone display has a 720p resolution, so you'll notice small pixelation with text, icons and images.

Surprisingly LG G4 Stylus has an average camera but it has very few modes, like face beauty, HDR. Yes it has an 8-megapixel rear-facing camera and 5 megapixel front-facing camera both can record 1080p video. And has a **laser-guided auto-focus**.




Pictures taken on its primary camera turn out not very detailed, overly smoothed and with dull colors. In low light the white balance gets disturbed and noise is clearly visible. The only good thing that saves this camera from total downfall is its highly effective laser autofocus. While zooming on an image, the shot becomes very dull.

The **5 MP front camera** is decent with day light. In general, if you're looking for a camera that can take casual shots, this will satisfy you.

**Android Lollipop** is the operating system, to which LG added its own Optimus UI software. The notifications and shortcuts menu has been reworked to become more customizable than in stock Android. There's a multitasking feature that lets you open apps onscreen at once.

The included **4 inch stylus** has a soft rubbery tip, it's just a regular stylus that can select, swipe and drag.

The phone has a loud voice output that's even clear in noisy areas. However, playing games like Asphalt 8 was not a smooth experience but Subway surfers, Candy Crush are easy to play on this device. LG G4 Stylus **scores 21679 on Antutu, and 14200 on Quadrant** benchmark.

Battery life is the second best feature after display which makes this phone a good option to buy. Its **3000 mAh battery make it long-lasting**, with up to two days of standard use. The G4 Stylus lasted 9 hours of continuous video streaming battery test.

## KEY SPECS

- 5.7-inches IPS LCD 720 x 1280 pixels (~258 ppi )
- Corning Gorilla Glass 3
- Android OS, v5.0 (Lollipop)
- Qualcomm MSM8916 Snapdragon 410 (LG H635)
- Quad-core 1.2 GHz Cortex-A53 (LG H635)
- 8 GB internal storage, 1 GB RAM (LG H635)
- microSD, up to 128 GB
- 8 MP rear camera, 5 MP front camera
- Li-Ion 3000 mAh battery

Good display, has a pen, removable high capacity battery with good battery life

Slow processor makes it sluggish at times

## BOTTOM LINE

LG G4 Stylus is a phone with good display and long battery life. Yes buying a smartphone having price more than 15k with average camera does not make sense but this phone can be a good choice for a person who needs to buy a smartphone with bigger display and long battery life.

## SCORE

Price: **7/10**
Performance: **6/10**
Features: **8/10**

**Overall: 7/10**

For detailed reviews, visit **www.pcquest.com**

# Moto X Play

The latest version of X Play is rugged, beautiful, responsive, and has great battery life

- Swaraj Sourabh

**Price: ₹18,499**



Motorola has split its premium Moto X brand of smartphones into **two different segments—Play and Style**. While the former (reviewed here), has been positioned as a mid-range smartphone in the 20K price bracket, the latter continues to target high-end smartphone users, and falls in the 30K price range.

The Moto X Play has a plastic back cover, with a **rubbery finish that feels really good and grippy**. It feels like a premium flagship phone. The company's trademark at curvy back design continues to act as the icing on the cake. The thin bezels on the side of the large screen means the Moto X Play doesn't feel too bulky in hand, and is actually quite comfortable to hold.

The **5.5-inch screen is a full 1080p high definition**, which combined with 401 ppi pixel density provides a bright and vibrant display, We were impressed with its responsiveness even at the slightest touch. The smartphone clocked 490 LUX at full brightness level with a pure white background, implying clear outdoor screen view.

It also showed that the Moto X Play, with a **1.7 GHz Qualcomm Snapdragon 615 Octa-core CPU, Adreno 405 GPU and 2GB of RAM**, works well in multitasking or playing heavy graphics intensive games like Asphalt 8 and dead trigger 2. Moto X Play offers pure Android and is completely customizable. The phone has no heating issues. On calling, the voice is loud and the basic functionality like messaging, search & select for a contact are good. Moto X Play scores 36018 on Antutu benchmark.

For connectivity, the phone has **Wi-Fi a/b/g/n/ac, Bluetooth 4.1, NFC and GPS+GLONASS** (Russian designed substitute for GPS).

The Moto X Play has a **21 MP camera with f/2.0 aperture and features** like autofocus and dual-tone LED flash. It can capture videos in 1080p. Shots in daylight are perfect and detailed. Its 5 MP front-shooter has f/2.0 aperture and clicks great selfies. Low light performance isn't excellent, but decent nevertheless. Its a high res camera, but we missed having some basic features like Face Beauty mode, Face detection, and image stabilizer, which are quite common these days.

One of the **best selling points** of the Moto X Play is its **huge 3,630mAh battery**, which Motorola promises will last two days on a single charge. We will go with that claim because in our tests, it lasted a good 10 hours 45 minutes while playing a video over WiFi with full volume and brightness.

## KEY SPECS

- 5.5 inches IPS LCD 1080 x 1920 pixels
- Resolution(~403 ppi), Gorilla Glass 3
- CAMERA rear 21 MP, Front camera 5 MP
- Android OS v5.1.1 OS
- Qualcomm MSM8939 Snapdragon 615 SoC
- 2 x Quad Core Cortex A53 CPUs (1.7 GHz and 1.0 GHz)
- 2 GB RAM, Internal 16/32 GB
- microSD, up to 128 GB
- 3630mAh battery

Good camera, Bright screen, Stock Android, front-facing speaker

A little bulky

## BOTTOM LINE

Moto X Play is a rugged phone having latest Moto camera and superb display with good design portfolio. The stock Android is good for those who want to customize their phones.

## SCORE

Price: **7/10**
Performance: **8/10**
Features: **8/10**

**Overall: 8/10**

For detailed reviews, visit **www.pcquest.com**

SMARTPHONE

# HTC ONE ME

The phone provides smooth multitasking experience, brilliant snaps, but average battery life

- Swaraj Sourabh

**Price: ₹35,465**




HTC One ME comes with **metal and plastic construction**, the back cover is made of quality plastic, but catches smudges and fingerprints easily. On the edges, it has a metallic frame that, coupled with the high-quality polycarbonate back panel, gives the smartphone a solid feel. The curved back casing makes it easy to grip in the hand at all times.

HTC One ME has a **5.2-inch IPS display panel** with screen resolution of 1440x2560p i.e 2K or QHD. The contrast levels are pretty balanced and colour reproduction is good so that you get punchy colours that are not over-saturated. HTC One ME's display panel also delivers under direct sunlight so you have no trouble reading outside.

HTC has an octa-core Mediatek **MT6795 chipset with 64-bit archtitechture** running at 2.2 GHz. This smartphone is paired with 3 GB RAM. The smartphone comes with 32 GB of internal storage and supports microSD cards of up to 2 TB capacity which is one of the highest. One ME runs on the company's Sense7.0 UI, based on Android 5.0.2 (Lollipop).

The **20 MP camera** of HTC ONE Me is really good and fast. It can capture great shots. The camera is supported by dual tone LED flash. It has all the camera settings that a flagship phone has such as Geo-tagging, face/smile detection, HDR, panorama, voice capture, continuous mode, etc. We were more impressed by the quality of the selfie shots. However, by default the phone beautifies the front camera shots a bit and you will need to switch that off to look more natural.

The device in **highly sensitive** even to a soft touch on display.

The marriage between **3 GB RAM and MT6795 chipset** of HTC One ME is very reliable and it is able to do multitasking smoothly. Plus, it also ensures smooth game play even with high-end games like Asphalt 8.

The **fingerprint scanner** used in HTC One ME is highly sensitive. The fingerprint sensor lights up the screen as soon as you touch it with any finger, though it unlocks the handset only if you place the registered finger/thumb on the scanner.

HTC One ME has a good speakers with **Dolby Audio and the 5.2-inch QHD screen** make for a great pair as both the video and sound are of excellent quality.

The **battery capacity** of the smartphone is **2,840mAh**. Playing a continuous video over Wi-Fi with full brightness and volume, the phone lasted for about 3 hours 45 minutes, which is average. Apart from standard connectivity features (like 2G, 3G, 4G, Wi-Fi, Bluetooth 4.0, NFC and microUSB 2.0), this smartphone also comes with Infrared.

## KEY SPECS

- 5.2 inches 1440 x 2560 pixels (~565 ppi)
- Android v5.0.2 OS
- Octa-core 2.2 GHz
- 3 GB RAM, Internal storage 32 GB
- Expendable up to 2TB
- Rear Camera 20 MP, Front camera 4 MP
- Dual SIM
- Non-removable Li-Po 2840 mAh battery

Fast and smooth performance, good screen and audio,good camera

Average battery life, frequent heating on gaming and watching videos, a little expensive

## BOTTOM LINE

HTC ONE ME is capable of smooth multitasking, and excellent front camera that takes cool selfies. You can also expand the memory to 2TB. It's battery life could have been better and it's price is on the higher side.

## SCORE

Price: **7/10**
Performance: **7/10**
Features: **8/10**

**Overall: 8/10**

For detailed reviews, visit **www.pcquest.com**

# Lenovo VIBE Shot

A beautiful smartphone with excellent multi-tasking capabilities, decent battery life, and and a 16 MP camera that's equipped with features of a mini DSLR camera

- Swaraj Sourabh

**Price: ₹25,499**



**Metal plus glass design portfolio:** The Lenovo Vibe Shot offers elegant and premium design and good build quality. Anodized aluminum frame around the edges and glass is used for the back and front panel. The front panel has Gorilla Glass 3.

The sides feature an **anodized aluminum frame** – it looks stylish and clean, but the frame feels uncomfortable in hand. On the left edge it has dual SIM slot on the top and microSD card slot at the bottom. Since it is a camera centric phone you will find direct camera access button on the right side. There's an **adjacent button that is used for toggling modes**. There are also the usual volume rocker and power buttons. The bottom side of the phone has the USB port and loudspeaker while the top frame accommodates the 3.5 mm jack and secondary microphone.

The Lenovo Vibe Shot has a **5.0-inch IPS LCD display with 1080 x 1920 pixels** resolution and 441 PPI pixel density. The good thing about the display is its wide viewing angle, which is decent. The screen is responsive even with a slight touch.

The main highlight of the VIBE Shot is its **16 MP rear camera, which has 2997 x 5328 resolution** and auto-focus. It has a six-piece module lens camera with a tri-color flash and Optical Image Stabilization. It's loaded with features including auto and Pro (fessional) modes. In Pro mode, you can manually adjust white balance, focal length, shutter speed, ISO and aperture. The camera delivered excellent outdoor daytime shots, and even switched automatically to HDR mode. Night mode however doesn't come out very well in Auto mode. You'll have to play around with the Pro settings to get the shots you want in the dark. Its selfie camera is eqipped with beauty mode that automatically improves your selfie shots. It can record 1080p video. Plus, there's a Quick Snap feature to take photos even when the screen is off by double pressing one of the volume keys or the dedicated camera button.

The smartphone has a **64-bit, 1.7 GHz Octa-core Qualcomm Snapdragon processor**. The 4G-enabled Lenovo Vibe Shot comes with 3 GB RAM, which results in great multitasking experience, with no lag whatsoever. It sports the latest Android v5.0.2 (Lollipop) OS, which coupled with Lenovos own VIBE UI runs very smoothly. The smartphone scored 38604 in Antutu and provides a brightness level of 430 LUX, which implies you'll get clear visibility even when outdoors.

Powered by a **3000mAh Li-polymer battery**, the phone gives more than a day's back up with regular use. While playing video continuously over Wi-Fi with full brightness and volume, it lasted for 8 hours 14 minutes, which is really good.

## KEY SPECS

- 5.0 inches IPS LCD 1080 x 1920 pixels (~441 ppi)
- Corning Gorilla Glass 3
- Android OS, v5.0.2 (Lollipop)
- Qualcomm MSM8939 Snapdragon 615
- Quad-core 1.7 GHz Cortex-A53 & quad-core 1.0 GHz Cortex-A53
- 3 GB RAM, Internal storage 32 GB,microSD, up to 128 GB
- 16 MP Rear camera,8 MP Selfie camera
- Li-Po 3000 mAh battery, Dual SIM

Good build quality, good battery life, perfect display, dedicated camera buttons, and manual mode for DSLR functionality.

Low light camera performance in auto mode is not very good.

## BOTTOM LINE

Lenovo VIBE Shot has elegant looks and a faster CPU with 3 GB RAM and good battery life. Its camera delivers excellent shots, and with the added Pro mode, amateur photographers can get the taste of a DSLR camera.

## SCORE

Price: **7/10**
Performance: **9/10**
Features: **8/10**

**Overall: 8/10**

For detailed reviews, visit **www.pcquest.com**

## Benq W1070+ Projector

**Price: ₹1,10,000**




**KEY SPECS**

- Full HD single-chip DLP projector
- 1080p (1920 x 1080) resolution
- 3D ready, 2200 lumens light output
- 1 VGA and 2 HDMI
- 1 MHL (shared with HDMI2)

Value for money, good picture quality in both 2D and 3D, easy to setup, compact design

Not impressive sound and runs loudly

Benq W1070+ is a small yet powerful projector to convert your living room into a cinema hall. It delivers subtle and punchy picture quality with satisfying deep black levels. The compact projector is perfect to convert your home into cinema.

**SCORE**

PRICE: **8/10**
PERFORMANCE: **9/10**
FEATURES: **9/10**

**Overall: 9/10**




## SanDisk Connect Wireless Stick

**Price: ₹2,790**

**KEY SPECS**

- 16 GB, Wi-Fi, USB 2.0
- supports iOS version 8.0 or higher
- Android version 4.2 or higher
- Windows 8, Windows 7, Windows Vista, or Mac OS 10.6 or higher

Compact design, faster wireless transfer, user-friendly app

None

As the name suggest, "SanDisk Connect Wireless Stick" is a small portable flash drive that comes with wireless connectivity. It's built to work with both PCs and smartphones. Simply plug it into your PC's USB port and you can connect up to 3 devices to it simultaneously over wireless. The drive is available at an affordable price and offers plenty of space to backup data from smartphones, cameras, or other devices. Plus it gives you the freedom to share your drive's data with others with its simple yet useful and intuitive user interface.

**SCORE**

PRICE: **9/10**
PERFORMANCE: **9/10**
FEATURES: **10/10**

**Overall: 9/10**

## Panasonic HC-V160

**Price: ₹17,990**




**KEY SPECS**

- 1920x1080p Full-HD video recording
- 77X intelligent zoom, 38X optical zoom
- BSI sensor, Crystal engine
- 32.3mm wide-angle shooting, image stabilizer
- 2.7-inch rotatable LCD display

77X zoom, image stabilization, video quality

Poor still image quality

Panasonic HC-V160 is a viable choice for consumers looking for an affordable camcorder. You can record quality videos and click still images as well. This enables you to capture life's moment, whether it's a small party, any occasion or you are on holiday. Its 77X intelligent zoom gives you the opportunity to even capture longer distance objects easily.

**SCORE**

PRICE: **9/10**
PERFORMANCE: **9/10**
FEATURES: **9/10**

**Overall: 9/10**

For detailed reviews, visit **www.pcquest.com**

## Dell Inspiron 15 3000

**Greendust.com Price: ₹25,500**

**KEY SPECS**

- Intel i5 CPU, 4 GB RAM, 1 TB HDD
- Optical Drive, 4 cell 40 WHr battery
- HD (720p) webcam, LAN port
- Bluetooth 4.0, Wi-Fi, 15.0 inch HD display
- HDMI, USB 3.0, 2 USB 2.0
- Media Card Reader (SD, SDHC, SDXC)
- Ubuntu 14.04 OS

Buildquality, display, responsive touchpad, affordable

Poor battery life, only 3 hours 22 minutes on video test

Dell Inspiron 15 3000 carries the trail of Inspiron series with the same simplicity. It has a solid combination of i5 processor and 4 GB RAM which makes it a powerful laptop for daily productivity. The device is a viable choice for people looking for an affordable device as it available at a really low price on Greendust.com, without compromising on performance.



**SCORE**

PRICE: **10/10**
PERFORMANCE: **8/10**
FEATURES: **8/10**

**Overall: 9/10**



## TP-Link TL-WA860RE Wi-Fi Extender

**Price: ₹2,399**

**KEY SPECS**

- Supports 802.11b/g/n
- 10/100Mbps Ethernet Port
- 2 external antennas
- supports Wi-Fi Protected Setup (WPS) connection

Easy to setup, easy plug and play, portable

None

TP-Link TL-WA860RE Wi-Fi extender plugs into your mains power supply and boosts the signal strength of your existing Wi-Fi network. The miniature sized extender has a wall-mounted design that makes it easy to deploy anywhere flexibly. This is a good choice for both home and small offices to extend WiFi signal strength up to 10 to 15 meters. Moreover, its integrated power socket ensures that no power outlet goes to waste.

**SCORE**

PRICE: **8/10**
PERFORMANCE: **9/10**
FEATURES: **9/10**

**Overall: 9/10**

## Toreto Energy Boost

**Price: ₹2,999**

**KEY SPECS**

- 6500 mAh battery
- Four LEDs, 2.1 A output
- Auto-off and energy saving technology
- Multiple protection circuit for high safety and reliability

Build quality, fast charging, compact design

Higher self-charging time and a little expensive

Toreto Energy Boost power bank has the capacity to power up smartphones and other devices quickly. Though, its self charging time is quite high, yet it is powerful enough to charge more than one smartphone easily. And weighing just 135 gms, it is a perfect travel partner.




**SCORE**

PRICE: **6/10**
PERFORMANCE: **9/10**
FEATURES: **9/10**

**Overall: 8/10**

For detailed reviews, visit **www.pcquest.com**

TV

# LG 65UF950T 4K Super UHD TV

- Anuj Sharma

Taking LG's Home Entertainment streak forward, the all new SUPER UHD series comes with ColorPrime technology featuring ULTRA Luminance, a 4K In-Plane Switching (IPS) panel and a Prime Mastering Engine for a truer cinematic experience

**Price: ₹3,89,900**

**Thin, flat and gorgeous,** the LG's Super UHD TV certainly has killing looks. Even with the TV turned off, the EF9500 looks great. The 4K screen is packed in the ultra slim narrow border around the screen measuring just 0.33 inches.

Moving on the smarter pace, LG's Super UHD range is equipped with **advanced WebOS 2.0** interface which includes updated features such as My Channel, Input Picker, Quick Settings and Smart Share. The new version of WebOS is faster and allows easy transition even in deep menu settings. Users can access the Launcher at any time, regardless of the type of content they're enjoying, and quickly switch to another service, app or broadcast.

In movies like **The Epic, Hugo, Mad Max:** Fury Road, the 3D rendered by TV is flicker free, excellently pops up on screen giving you a theatre like feel and experience at home and is easy on eyes.




The LG's ColorPrime technology delivers **outstanding color performance**, increasing color spectrum by upto 20% compared to conventional UHD TVs. It is capable of producing more hues and shades and Super UHD Display makes images more realistic and vibrant. In terms of Black level also the TV did not disappoint us and images came through very well in black and near-dark areas in movies like Gravity, Interstellar, Sin City and simply looked better than the others. The Ultra Luminance engine lets you experience darker scenes in brightness with higher peaks and enhanced contrast ratio for more vivid & realistic images.

The TV is equipped with **4.2 Channel Surround Sound designed by Harmon Kardon** that produces 60W sound output from the down firing speakers. According to LG, the Auditorium Stand on which the TV rests uses reflection to boost sound from the down firing speakers for a deeper audio experience.

The new **Magic Motion Remote** is redesigned and with the adoption of number keys is larger than before and helps in easy switching along with simpler connectivity options. The remote provides a comfortable fit in hand and also perfectly acts as a universal remote for easy control of the set top box, Blu-ray player, sound bar & home theatre without the hassle of handling multiple remotes

## KEY SPECS

- 65" 4K IPS LED TV
- 3840 x 2160 Resolution
- webOS 2, 60W Audio Output
- 3D, 4 HDMI inputs
- 3 USB Ports
- Built-in Wi-Fi and full web browser capability
- Wi-Fi Direct

Excellent picture quality with excellent color rendition, 3D capability, Harman Kardon audio system, black levels, WebOS 2.0 for faster transition between menus

Commands a premium price

## BOTTOM LINE

The LG 65UF9500 Super UHD TV delivers high level of image quality interpolating picture in a way where every color comes alive. The LG UF9500 Super UHD TV's picture betters that of any other TV we've seen, with perfect black levels and exceedingly bright whites. It's equally adept in bright and dark rooms, showed accurate color, excellent uniformity and solid video processing coupled with powerful audio.

## SCORE

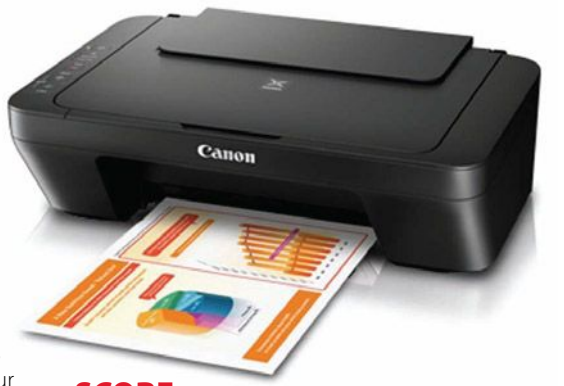
Price: **8/10**
Performance: **9/10**
Features: **9/10**

**Overall: 9/10**

For detailed reviews, visit **www.pcquest.com**

## Canon Pixma MG2570S Inkjet MFP

**Price: ₹3,650**




**KEY SPECS**

- Color Inkjet, Print, Copy, Scan
- Print Resolution : 4800*600 dpi
- Dimension: 426 x 306 x 145mm
- Input tray: 60 pages, USB connectivity

Lightweight, easy to use

Text quality not good in copying

The Canon PIXMA MG2570S is Compact and lightweight MFP which allows it to easily fit into even the smaller spaces and shelves in a home. During our tests we found that the text printed was sharp and crisp. Bright colors pop out as they should, and the text is well-formed all the way down to smaller font sizes. Overall, it is a good color inkjet MFP for small printing requirements and is best suited for students and home segment users.

**SCORE**

PRICE: **8**/10
PERFORMANCE: **8**/10
FEATURES: **9**/10

**Overall: 8/10**



## Boat Rugged Bluetooth Speaker

**Price: ₹3,990**

**KEY SPECS**

- Bluetooth 4.0
- Frequency Response: 100Hz - 20KHz
- Signal-To-Noise: >85dB
- Weight: 446grams
- Dimension: 164*50*73mm

Compact, Splash proof design

Slight distortion on bass heavy tracks

As the name suggests, RUGGED is a fashionable, stylish and trend setting portable Bluetooth speaker which is splash proof, has silicon casing all around for accidental drop protection and also packs an in-built powerbank to juice up your devices. From a sound standpoint, the speaker plays pretty loud and is pretty decent for its size.

**SCORE**

PRICE: **8**/10
PERFORMANCE: **8**/10
FEATURES: **9**/10

**Overall: 8/10**

## Amkette S8 Ear-Phone

**Price: ₹995**



**KEY SPECS**

- 10mm driver
- Sensitivity: 98dB, In-built Mic
- 3 Set of Ear Tips
- Frequency Response : 20-20 KHz

Lightweight, Secure fit, water resistant design

Bass not powerful

The Amkette Pulse S8 Pulse earphones are sweat and water resistant,and features a convenient neckband that ensures secure fit making it a perfect partner for running, jogging, and gyming. The design also allows you to listen to music comfortably when you're going the distance on a treadmill. The Amkette Pulse S8 also comes with three sets of earbuds (S/M/L) to suit the size of your ear hole and are available in three bright colours- Blue, Neon green and black.

**SCORE**

PRICE: **8**/10
PERFORMANCE: **7**/10
FEATURES: **8**/10

**Overall: 8/10**

For detailed reviews, visit **www.pcquest.com**

## ENTERPRISE IT

### Amazon Web Services Announces AWS IoT

AWS IoT is a new platform that makes it easy for devices — cars, turbines, sensor grids, light bulbs, and more – to connect to AWS services so that companies can store, process, analyze, and act on the volumes of data generated by connected devices on a global scale. Devices connect to AWS IoT's Device Gateway, and manufacturers can set rules for how AWS IoT handles the data they send, and the actions they take when various conditions are met (such as sending an alert when a pressure sensor reports an unusually high reading or a motion detector is triggered). AWS IoT provides mutual authentication so that data is never exchanged between devices and AWS IoT without proven identity, and encrypts all data coming into and out of connected devices.







### Azure SiteRecovery Provides Native Support for SQL AlwaysOn

Microsoft has announced the integration of its SQL AlwaysOn service with Azure Site Recovery. With Azure Site Recovery providing native support for SQL AlwaysOn, SQL Availability Groups can be added to ASR Recovery plans along with virtual machines. As a result of this, all capabilities of ASR Recovery plans like sequencing, scripting and manual actions can be leveraged to orchestrate the failover of a multi-tier application that uses a SQL database, configured with AlwaysOn replication, as its backend. SQL AlwaysOn is used for disaster recovery of SQL Servers, and ASR can be used to replicate the virtual machines forming application and web frontend tiers to Azure.This solution is currently supported only for System Center Virtual Machine Manager managed environments.

### Teradata Software Pushes the Analytic Edge with Internet of Things Data

The new Teradata Listener and Teradata Aster Analytics on Hadoop make it possible to intelligently listen in real-time and then use analytics to see the distinctive patterns in massive streams of IoT data. Teradata Listener is an intelligent, self-service software for ingesting and distributing fast-moving data streams–either individual or multiple streams–at one time. It allows customers to push data to Hadoop, Teradata Aster Analytics, Teradata Database, and other platforms. It enables data scientists, business analysts, and developers to quickly and easily analyze new data streams for faster answers to business questions. Without needing to rely on IT for help, users can analyze data from numerous sources including sensors, telematics, mobile events, click streams, social media feeds, and IT server logs.



## MOBILITY

### Facebook Launches Messenger on the Apple Watch




The watch version of the messaging app is designed keeping in mind Watch OS2, the latest version of Apple's software for the Apple Watch and delivers Messenger's functionality into it. Messenger app that allows users to send text messages, audio messages, and share their location. You can't type out full responses to messages but you can choose from a list of canned answers, send your location, "like," post stickers or record a voice message with the watch's built-in microphone. On the receiving side, you can also check out photos, videos and voice messages. Though the app supports Facebook's stickers, animated stickers and animated GIFs will only appear as static images on the watch app.

### Comparemunafa.com: One-Stop Shop to Compare & Buy Across eCommerce Portals



The US $16 billion eCommerce market in India, with its multiple eCommerce portals, also needs aggregating portals that offer Comparison or prices, Deals, and bonus points at single place. This new aggregator, Comparemunafa.com, does just that and also provides additional features, which allows customer to set price drop alert and analyze price history graphs. CompareMunafa.com has affiliate partnership with leading e-shopping sites like Snapdeal, Flipkart, Amazon, ebay, Jabong, Paytm, Infibeam, Homeshop18, Croma, ask me bazar and so on.

## HOT LAUNCHES

### Google Launches Nexus 5X And 6P Smartphones In India Running Android Marshmallow 6.0

The Nexus 5X is manufactured by LG and comes with a 5.2-inch Full HD screen and 2700 mAh battery. At the back is a 12.3 MP camera with laser-assisted autofocus while at the front is a 5 MP camera. The phone is powered by a Qualcomm Snapdragon 808 SoC with 2 GB of RAM. The Nexus 6P is manufactured by Huawei and is a first full metal-body phone that comes with a larger 5.7-inch WQHD display and 3450 mAh battery. It is powered by a Snapdragon 810 v2.1 SoC and 3GB of RAM. The 6P also has the same 12.3MP rear camera as the 5X but comes with an 8MP front facing camera with HDR+ shooting mode. Nexus 5X will be priced at Rs 31,900 (for 16GB variant) and Rs 35,900 (32GB), while Nexus 6P will be available at Rs 39,999 (32GB) and Rs 42,999 (64 GB) in India. Available for pre-orders in India through our e-tailing partner's amazon and Flipkart.




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## Gionee Launches ELIFE E8 with 24MP Camera at Rs.34,999

ELIFE E8 comes packed with 24 MP rear camera, which will be able to produce photographs up to 1200 Mpxl in resolution. E8 is the first Android smartphone to offer Lossless zoom that maintains image quality even at 3X zoom along with host of enhanced camera features for producing a professional level images on the go. The camera also integrates a six-element lens with sapphire glass, optical image stabilisation, 4K video recording. The Gionee E8 offers android 5.1 out of the box, Mediatek MT6795 Helio X10 Chipset and Octa Core 2.0 GHz CPU. Along with Biological (Fingerprint) recognition system it also offers Dual SIM 4G, 6.0inch WQHD Super AMOLED Display, 64GB ROM+3GB RAM, NFC, Dual Speaker , HIFI Sound, 3500 mAh Battery and fast charging.

## Samsung Z3 – A Tizen-based Smartphone Available in India at Rs 8,490

The dual-SIM Samsung Z3 runs on Tizen 2.4, and features a 5-inch HD Super Amoled display. Running on a 1.3GHz quad-core Spreadtrum SC7730S SoC coupled with 1 GB of RAM, the smartphone features 8 GB of built-in storage that's expandable via microSD card (up to 128GB). The Z3 bears an 8-megapixel rear camera with a LED flash, and a 5-megapixel front-facing camera. Connectivity options include 3G, Bluetooth 4.0, Micro-USB, GPS with A-GPS, and Wi-Fi 802.11 b/g/n. Powered by a 2600mAh battery, the Samsung Z3 also features an Ultra Power Saving mode.





## Panasonic Toughpad FZ-Y1:The World's First 20" 4k Tablet PC now available in India

Equipped with the latest 5th generation Intel Core vPro processor, 8 GB RAM, and multiple input ports, the FZ-Y1 has been engineered to elevate business operations into ultra high-definition. For professionals in fields where visual clarity and collaboration are essential, it features a brilliant and immersive 230 pixel-per-inch IPS alpha LCD touchscreen with a 15:10 aspect ratio and wide viewing angles. Packaged in a 12.5 mm slim and 2.41 kg light body, the stylish, lightweight glass fiber chassis can be easily converted into desktop mode with the cradle accessory. Panasonic's flagship rugged durability is ensured by the toughened, scratch resistant glass, which can withstand drop resistance up to 76 cm. The Windows 8.1 Pro operating system ensures high performance, security, and an intuitive touch experience, including multiple window viewing. This new range of Toughpads is priced at Rs. 2.4 Lacs.

## Canon EOS C300 MARK II, a 4K Camera for Movie Makers Launched at Rs.12,99,000

The second generation Cinema EOS 4K camera system for cinema, documentary, event and commercial videography packs in a wide range of new and improved features including 4K/2K/Full HD internal and external recording (including 4K RAW output) and a new 10-bit Canon Log 2 Gamma. This powerful new camera also features an expanded dynamic range of 15 stops, improved Dual Pixel CMOS Autofocus, innovative focus assist engineering and CFast recording technology. The Camera integrates an 8.85 Megapixel Super 35mm 16:9 CMOS sensor that supports 4K (DCI) recording with a maximum resolution of 4096 x 2160 pixels. The camera fully utilizes the image data delivered by this 4K CMOS sensor to also enable Over Sampling HD Processing for 2K (DCI) and Full HD1080/60p recording.



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